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DEVELOPING LOCAL STRATEGIES AS ALTERNATIVES TO ABANDONMENT OF LIGHT DENSITY RAILROAD LINES

DEPARTMENT OF TRANSPORTATION ★ UNITED STATES OF AMERICA ★

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16. Abstract

This report provides technical documentation of the research methodology which was developed and employed in order to produce a manual entitled Handbook for Preservation of Local Railroad Service. That document is intended to assist shippers, local and state governmental units, and planners, in their efforts to maintain Class I branch line service or investigate shortline railroad alternatives to such Class I branch line service.

Approaches which were considered are grouped generally into two categories: Those which are designed to assure the continuation of currently existing service; and those which will result in a newly-formed independent railroad operation. Discussions of each specific alternative are enhanced by the provisions of case study information where appropriate, and a variety of ideas are presented which relate to the economics of light density rail line operations. In addition, the Handbook provides its readers with a rather unique method for the estimation of railway operating costs which are relevant to the independent railroad alternative.

Information sources for the research included: personal interviews with representatives of 60 Class II railroads (with on-site inspections of property in most cases) and a variety of other interested parties; an analysis of annual report data as submitted to the ICC by 148 such railroads; and a survey of the previously published literature.

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EXECUTIVE SUMMARY

Right-of-way mileage operated by the United States railroad industry has declined from a high of 254,000 miles in 1916 to an estimated 200,000 miles in 1976. In April of that year an additional 12,000 miles were candidates for abandonment, and recent DOT studies revealed over twice that amount of track is basically uneconomical to operate. There are several reasons for the rail abandonment trend, most important of which is the loss of traffic to truck, barge, and pipeline competitors.

Unless energy or environmental considerations force a change in national transportation priorities, the rail abandonment trend will continue. It may, in fact, accelerate as railroad regulatory policies reflect growing opposition to the traditional concept of cross-subsidization. An industry that averaged an annual rate of return of less than three percent for the period 1960-1974 cannot afford to provide marginal or money-losing services if it is to remain privately owned and operated.

Abandonment of some light density rail lines, however, can cause hardship for on-line shippers and, consequently, for local community economies. Forced transfer to higher cost transport modes, employment losses, and developmental stagnation because of an inability to attract new industry are all possibilities once the tracks are removed.

These negative effects of abandonment have resulted in a plethora of government and government-funded reports dealing with the question. The DOT contract responsible for this report has three objectives, none of which should overlap previous studies. First and of primary importance, it calls for production of a Handbook specifically to assist local interests wanting to evaluate realistically the advantages of and obstacles to preserving a rail service in some fashion. Second, and as part of the primary objective, an extensive interview program provides a cross section of expert opinion on the pros and cons of the different possible preservation alternatives. Third, and also part of the primary objective, new ideas are provided in estimating the costs of operation of independent short line railroads, one of the two recognized solutions for preserving a light density rail service.

The independent short line alternative, as just mentioned, is one of the two methods of rail service preservation. The second method involves having the current Class I service continued under some form of shipper or other local interest subsidy program. In the Handbook, the authors recommend the subsidy rather than the independent short line alternative because of the likely higher risk and cost of the latter. However, they warn that this is merely a rule of thumb, that each potential abandonment case must be evaluated on its own merits. In some cases, establishment and operation of an independent railroad may be best.

Of the two alternatives, the independent railroad receives the greater amount of attention because of the need to discuss the methodology and problems of company acquisition and financing, right-of-way rehabilitation, and carrier operation, topics that are superfluous if a service is to continue under present Class I standards and procedures. The independent alternative is divided

into four sections in the Handbook: (1) an overall evaluation of the short line, (2) a procedure for estimating short line revenues, (3) a procedure for estimating short line costs, and (4) an implementation procedure outline provided local interests decide to pursue the independent railroad course of action.

The authors argue that provided the Handbook is distributed to affected areas and in sufficient numbers such that all those considering rail line preservation activities become aware of its existence, then chances will be improved for achievement of two desirable objectives: (1) a stronger trunk line industry that will concentrate on providing service where the strongest demand exists for it, and (2) the continuation of light density railroad service where it genuinely is needed in the interest of the well-being of those served.

The Development and Nature of the Railroad Abandonment Problem

Right-of-way mileage operated by the United States railroad industry reached a peak of 254,000 miles in the year 1916.[1] (Footnotes appear at the end of the Introductory part.) Fifty-four years later, in 1970, this figure had declined to 206,000 miles, a 19 percent decrease.[2] From 1970 to March 1976, the Interstate Commerce Commission (ICC) approved abandonment of 10,500 miles.[3] In April 1976, an additional 12,000 miles, equally divided into mileage that might be abandoned by the newly created Consolidated Rail Corporation (CRC) and by the remaining rail carriers, cumulatively, were threatened.[4] The U.S. Department of Transportation study released in May 1976 showed 25,500 of 141,000 (18 percent) miles of line located in the 31 states outside the CRC's Northeast area to be potentially uneconomic to operate, thereby becoming possible candidates for ultimate termination of service.[5]

There are three primary reasons for railroad abandonment. First, the need for a given rail line may no longer exist. For example, a line built for the exploitation of natural resources will not be necessary after their depletion; or a line may not be needed if the market demand for the products carried by the line has declined to the point where remaining volume is inadequate to generate a profit for the carrier. Second, excessive railroad building in past decades resulted in the offering of many essentially duplicate services. There are cases where two or more relatively parallel lines need to be reduced to one to enable a profit at existing traffic levels. Third, and most important, a line may have lost freight shipments to competition in sufficient quantities to render the line a marginal or money-losing operation. The competition usually is the motor carrier, but may include barge, pipline, and airline companies.

Abandonments as an Evolutionary Process

Some transportation observers are inclined to view the railroad abandonment phenomenon as a natural, evolutionary process, the result of major changes in our society's channels of supply and distribution. These changes have been brought about by the United States' extensive financial support of modes in competition with the railroads, most importaatly, highway transportation, but also including water and air transport. In view of this commitment to the competition, some experts argue that abandonments are to be expected and should be carried through in view of the "unnecessary" resources expended in operating a money-losing service. For an industry that averaged only a 2.78 percent rate of return for the period 1960 to 1974, the money spent on such operations is especially missed by management.[6]

Opposition to Abandonment

On the other hand, a growing list of special interest groups has developed to oppose the abandonments, particularly in the last decade. These include:

1. On-line shippers that use the service and fear higher rates by the non-rail competitors if the tracks are torn up;

2. On-line businesses that do not use the service, but still fear higher rates through loss of truck-competitive rail service;

3. Local booster groups who foresee loss of industries that ship or receive rail-oriented commodities and/or future inability of the area to attract such firms. Movement of companies away from an area can mean shrinkage of the tax base and increased unemployment;

4. Railroad labor that opposes reduction of jobs for members; and

5. Both public and private interests concerned with future consumption and sources of energy, the effect on area environment resulting from decreased dependence on rail transport, and related matters.

The growing concern surrounding the abandonment of rail facilities has had two results. First, the completion of several studies by various private consulting and governmental agencies (almost all of which were funded by state or federal monies) that dealt with the abandonment question. These included the impact of abandonment on different industries and localities, the economics of modal shift, and the effect of light density service termination on future railroad finances.[7]

The second result was a change in national regulatory policy toward the railroads' traditional obligation to provide certain money-losing services if determined to be in the public interest. The provision of service over light density lines is an example of such an obligation if the ICC determined that local demand was sufficient to warrant the carriers' continuation of service, regardless of profit or loss considerations.[8] The principle of financing money-losing operations out of profitable ones is called cross-subsidization.

The Penn Central bankruptcy in June 1970, which was said to be due at least in part to forced cross-subsidization including the operation of light density lines, may have assisted in the partial revision of ICC policy toward rail abandonment. In a 1972 case, Ex Parte Proceeding No. 274 (Sub.-No. 1), the Commission established a "presumptive standard" regarding line profitability.[9] Whereas previously the burden of proof always was on the carrier to justify abandonment, now the burden of proof shifted to those opposing the abandonment when the presumptive standard was not met.

Congressional Action on Abandonment

The bankruptcy of the Penn Central and the financially chaotic railroad situation in the Northeast forced Congress to pass the Regional Rail Reorganization Act of 1973 (PL93-236) which directly considered the light density rail line problem. This legislation called for a determination of lines that were money-losing and/or "excessive," while providing a subsidy program for supporting continued operation of specified light density routes.

The Railroad Revitalization and Regulatory Reform Act of 1976 (PL94-210) expanded the federal role in light density line support by extending it from the Northeast states to nationwide, while increasing the federal contribution

to service continuation and the time period for such aid.[10]

The passage of these two pieces of legislation meant that the federal government became financially involved with the light density rail problem, an involvement which will continue at least until the expiration of the service continuation program in 1981. If recently exhibited Congressional and Administrative philosophies prevail in the coming years, direct aid for supporting light density lines will be aimed primarily at reducing the financial burden on affected parties of the loss of rail service. If a line cannot become self-supporting in a given number of years, it must be abandoned unless subsidized by local private and/or public interests. The philosophy opposes the cross-subsidization concept; each rail line must stand on its own in the long run. Given this premise, extensive miles of rail rights-of-way in all likelihood will be put up for abandonment in the coming years.

Objectives of the Study

The primary objective of the study was to produce a Handbook that could be used by local interests to evaluate their chances of retaining a railroad service that its current operator desires to abandon. Whereas these interests could obtain much of the material included in the Handbook through a variety of sources, the Handbook collected and consolidated this information into one reference and oriented it strictly for the would-be railroad preservationist, not for the regulatory commissioner, government planner, academician, or the like.

As such, certain points such as the need to be sincere when attempting to preserve a rail service were underscored and repeated several times. This served the purpose of providing an emphasis to a variety of extremely important points which were made.

This is not to say that the Handbook merely introduced some basic concepts. Complicated subjects, especially to a layman, such as revenue divisions, switching allowances, per diem, tax accruals, track standards, ICC regulation, to name a few, were discussed in detail. The point is that they were treated so that a newcomer to railroad transportation could glean their significance relative to the objective of saving a rail service. Bibliographies were included respective to several topics so that the reader could conduct further independent investigations into areas of particular interest. Also, ten appendices gave detailed information that was felt to be too lengthy to include as part of the text itself.

In referring to the material to be presented on initiating and operating a short line railroad, the reader of the Handbook was warned at the beginning as follows:

> The independent railroad operation material is designed for persons who are not closely acquainted with the railroad or transportation industry, but who have average business knowledge and a sincere interest in railroad preservation. We have included several outside references which readers may pursue as a means of accumulating expertise in different areas of railroad regulation, price setting and operations.

This type of expertise is particularly difficult to teach by the book. One learns primarily by doing in railroad operations. Talking with people in the field probably is the best learning device. It was found that such persons tend to be most helpful once they are convinced the visitor is serious, that the purpose of the visit is to learn about operations, and that they are not being visited by someone wanting *to tell them* how things should be done. The need for expertise in rail operations must not be underestimated. Initiating an independent company under neophyte management could mean financial disaster.

Handbook users also were informed as to what the Handbook would *not* do, that being to provide: (1) legal counsel to fight abandonment; (2) a guide to modal shift; (3) a means to measure the economic impact of loss of rail service; or (4) a detailed presentation regarding preparation of applications for Federal light density rail line subsidies. Bibliographies, however, were provided for the readers who wanted to investigate these subjects.

In summary, the Handbook was directed to the serious group or individual who wanted to preserve a railroad service and was willing to work and/or find the money required to support such an effort successfully.

Research Methodology

There are two primary methods by which railroad service may be preserved. The first involves having the service continue to be operated by the present trunk line carrier and its management under some type of private or public subsidy arrangement. The second is to have the trunk line service replaced entirely by an independent rail company formed and supported by local interests.

There were three major sources of information employed by the authors. They are identified here and discussed in detail throughout this report. The first was existing literature, as listed in a recent bibliography (see footnote 7). The actual references employed by the authors are listed in Appendix 1.

The second source was the material gained from interviews with 115 individuals representing 91 companies or agencies connected with the abandonment situation. The name, position, and agency of each interviewee is shown in Appendix 2. The method used in selecting the individuals interviewed, the subjects discussed, and the results obtained, together with an evaluation of the entire process, is the basis for Part II of this report.

The third source was calendar year 1974 financial data for 148 Class II railroad companies which were submitted to the ICC as required by the Interstate Commerce Act. The method used in selecting these carriers, the actual data and analytical techniques employed, together with the results of the analysis, are discussed in Part III of the report.

The Work Plan

The original proposal submitted to the U.S. Department of Transportation's Office of University Research was reduced in size and scope by that agency,

primarily in the area of reviewing historically the ICC and the Courts' opinions over the years regarding rail abandonment questions.

Consequently, a new work plan with new tasks and sub-tasks was completed and submitted with the researchers' first Progress Report dated September 12, 1975. A copy of the revised work plan is included in Insert A to this report. All work tasks indicated were accomplished as planned, and the original version of the Handbook was submitted to the Department of Transportation on July 17, 1976.

Importance of Retaining Existing Trunk Line Service

It could be argued that, at least in extent of coverage (as measured in pages), the revised work plan did not give adequate emphasis to the importance of analyzing various programs which may lead to preservation of the rail service currently being provided; rather, the emphasis was on the short line alternative. This imbalance definitely does not reflect favoritism by the authors for or against a particular alternative. It is required because a wider range of subjects must be covered when initiating an independent railroad operation as opposed merely to perpetuating an existing service. This wider range includes such topics as company acquisition and financing, right-of-way rehabilitation, and carrier operation, as well as other matters, depending upon individual line circumstances. A further discussion of the coverage imbalance is included in Part I of the Handbook.

Organization of the Report

Part I has introduced the railroad abandonment problem and explained the objective of the study. The primary data sources were explained and the overall work plan was described in the research methodology section. The remainder of the Report is divided into topical areas as follows.

Part II describes the objectives of and results obtained through the interviewing segment of the project. The selection of interviewees is discussed, the questions posed during the interviews identified, and an evaluation made of the degree of success exhibited by the particular methodology selected.

Part III consists of a detailed analysis of the 1974 data on Class II railroads obtained from the ICC. As described in that section, the information was used to derive cost-estimating procedures which can be used to determine the financial viability of a new short line rail carrier. The variables selected, statistical techniques employed, and the results achieved, are described and evaluated relative to their usefulness in an effort of this kind. Reference is made to several, at times lengthy, appendices that supplement the analytical discussion.

Part IV describes the Handbook. It includes a review of the book's objectives, outlines briefly its content by subject headings, and discusses its potential usefulness to the user who wishes to preserve a railroad service.

Part V presents a brief summary and conclusion to the entire project. The researchers' findings are summarized and the potential implications of the

INSERT A

REVISED WORK PLAN
DEVELOPING LOCAL STRATEGIES AS ALTERNATIVES TO
ABANDONMENT OF LIGHT DENSITY RAILROAD LINES

Specific Phases to Complete the Project

Task I

To finalize the project plan, including selection of independent short lines to study and development of a potential methodology with which to analyze and evaluate the data obtained. Sub-tasks include:

1. Identification of the alternatives to preserve rail service when abandoned or threatened with abandonment by a Class I carrier. See parts I, II, and V of this report. Completed by September 12, 1975.

2. Determination of operating short line rail carriers that are neither controlled nor operated by Class I carriers. See parts II and III of this report. Completed by September 12, 1975.

3. Written contact with these carriers to determine willingness to be interviewed relative to the objectives of the study. Completed by September 12, 1975.

4. Final determination of carriers to be interviewed and nature of questions to be asked; the number of carriers consisting either of all those responding favorably or a sample of those responding, depending upon the number of favorable replies. See part II of this report. Completed by September 12, 1975.

5. Determination of a potential methodology with which to analyze/evaluate information obtained through the interviews, together with the statistical data generated by the carriers, as reported to appropriate governmental agencies. See parts II and III of this report. Completed by June 12, 1976.

Task II

To conduct interviews with selected light density carriers; obtain additional statistical data as required from appropriate public and/or private agencies. See parts II and III of this report. Completed by March 12, 1976.

Task III

Analysis of the data. To determine the strengths and weaknesses of each alternative to rail abandonment by Class I carriers. It will include a final

methodology plus additional interviews or other contact with the sample carriers and collection of supplemental data as required. To be completed by August 12, 1976, by submission of this report.

Task IV

Preparation of the Handbook to aid local private/public groups to (1) evaluate the future potential of a threatened light density rail line and, depending on that analysis, (2) to describe the procedures involved when putting into effect a selected course of action. A feature of the Handbook will be to relate the experiences of and lessons learned by those carriers interviewed as to what is required to operate successfully a relatively light density short line railroad. Task IV is organized as follows (the parts and appendices of the Handbook covering the subjects are indicated in parentheses):

1. Determine source and estimate amount of revenues from line, including discussion/explanation of switching fees, revenue splits, local rates, non-transport revenues, and other income possibilities. (Part III of the Handbook)

2. Estimation of cost of providing service, including description of cost categories, potential effects on different cost categories according to method of operation and/or ownership of line, with finally an estimate of absolute costs of line operated. (Part III of the Handbook)

3. With above information, the potential profit and loss of the light density line in question can be estimated. Depending upon this evaluation, a decision on future action is possible. (Part IV of the Handbook)

4. Assuming decision is to implement action to preserve rail service by one of the methods described in the Study, the Handbook will outline the steps to take to initiate and follow through such a decision. (Part IV of the Handbook) This will include, among other things:

   a. Regulatory qualifications that must be met, certificates that must be obtained, and the methods required to resolve these constraints. (Part III of the Handbook and Appendices 4-5, 7-8 of the Handbook)

   b. Potential sources of independent railroad management. (Part III of the Handbook)

   c. Class I rail carrier personnel to contact regarding revenue splits/procedures, interchange arrangements, and possibilities for an indemnification service provided by the carrier. (Parts II and III of the Handbook and Appendix 9 of the Handbook)

   d. State and federal agencies as a potential short run subsidy source; agencies to contact regarding taxation questions. (Part IV of the Handbook and Appendices 1-3 of the Handbook)

Handbook's effectiveness with respect to future railroad abandonment are described.

Part V is followed by ten appendices which are referred to throughout the text.

Footnotes

[1] Railroad Abandonment and Alternatives, U. S. Department of Transportation, Washington, D.C., 1976, p. 9.

[2] Ibid., p. 10.

[3] Ibid., p. 22.

[4] Loc. cit.

[5] Ibid., p. 30.

[6] Yearbook of Railroad Facts, 1975 Edition, Association of American Railroads, Washington, D.C., 1975, p. 20. It should be noted that rate of returns for the Eastern, Southern, and Western Districts varied as follows for the 1960-1974 period: Eastern 1.46 percent, Southern 4.31 percent, Western 3.43 percent.

[7] For a comprehensive bibliography of these studies see: The Council of State Governments, The Northeast and Midwest Rail Crisis: A Bibliography of Current Literature, Council of State Governments, Lexington, KY, 1975.

[8] The Interstate Commerce Commission received the authority to deny or permit interstate railroad abandonment in 1920; see Sec. 1 (18) through (22) of the Interstate Commerce Act.

[9] A line generating less than 34 carloads of freight annually per mile of track was presumed to be unprofitable. The statistical validity of this rule has been questioned; see: Railroad Abandonment and Alternatives, op. cit., p. 97.

[10] For a short but adequate coverage of these pieces of legislation and their effect of rail abandonment, see: Railroad Abandonment and Alternatives, op. cit., pp. 14-17.

II. PERSONAL INTERVIEWS OF CARRIERS AND OTHER INTERESTED PARTIES

The Interviews as Related to the Objectives of the Study

The objective of this study was to produce a Handbook tailored especially for the individual or group that seriously proposed to preserve an existing rail service. While studies undertaken by various individuals, groups, and governmental agencies constituted valuable sources of information, the authors felt it necessary in an effort of this kind, to obtain the candid views and opinions of those persons who actually have been involved in both trying to preserve a rail service and *owning and operating a light density short line railroad.*

In the area of short line railroads particularly, there is no text or guide to acquaint rail neophytes with the problems involved with purchasing, rehabilitating, and operating such a property. As indicated in the first section of this report, one learns primarily by doing in the field of railroad operations and by talking with people in the field, in all likelihood the best teachers. At the outset, therefore, the authors felt extensive interviewing would be required if the Handbook were to be successful. In concluding the study, the researchers are more convinced than ever that such an effort was necessary. With perhaps the one exception of the May 1974 R. L. Banks study entitled Short Line Techniques to Improve Financial Viability of Light Density Lines--Major Railroads, no sources encountered by the researchers could duplicate the information derived from the various people visited.

As it turned out, the interviews also assisted in determining the advantages and disadvantages of the various private and publicly-sponsored programs to have light density line service continued by the currently serving Class I or trunk line carrier. Especially in the area of disadvantages or weaknesses associated with various programs, ideas surfaced that were not discussed in government releases or trade journal coverage of the projects.

In all cases, the researchers tried to talk with all parties involved with a particular program and/or area of potential friction or controversy. In preserving current service by a trunk line, for example, one solution by a group of shippers on a Penn Central branch line up for abandonment was to form an association that indemnified the railroad against loss in return for continued service on the line. In this case, both the individual responsible for founding the association and the railroad official with whom he negotiated were interviewed. Where an Iowa Cooperative convinced a Midwest trunk line to rehabilitate the track which served the shipper in return for a non-interest loan to finance the work, interviews were held with both the Cooperative's manager and the responsible railroad executive. In evaluating Iowa's apparently successful rehabilitation program, discussions were held with the Governor, State Department of Transportation, and Energy Council Officials, railroad managers of the affected lines, and grain shippers located on the rebuilt rights-of-way. The Handbook reflects these ideas, as well as those of academicians and government researchers regarding the same programs.

In all, the researchers talked with 115 people connected with the rail abandonment problem or railroading in general. Of these, 86 were railroad managers and/or officials.

The Carrier Selection Procedure

It was concerning short line operations and the relationships between trunk and short lines that the interviews were most valuable. In view of the time and money available for this activity, it was necessary to concede that personal contact could not be made with all parties who were potentially capable of offering usable advice and ideas. Therefore, a selection procedure was used to reduce the number of possibilities to a manageable level.

After reviewing the number of types of carriers that were neither Class I nor trunk line carriers, the researchers decided to contact initially all Class II line-haul railroads which were neither owned nor operated by a large carrier. In addition, interview candidates were limited to those lines located east of a line formed by the eastern boundaries of the states of New Mexico, Colorado, Wyoming, and Montana. Thus, Class I and II switching and terminal railroads, industrial carriers, Class I subsidiary companies and western lines were excluded. (See Appendix 3 for list of carriers contacted.) These exclusions were made for three reasons. First, switching and terminal and most industrial railroads are located in areas where the abandonment problem is not as critical as it is in other areas. Second, it is unlikely that a Class I carrier would propose abandonment only to have a subsidiary take over the service. Third, time and the project travel budget would preclude travel to the far West.

With a few exceptions, a form letter was sent to the highest ranking officer on the short line property describing the project and the Handbook, and requesting assistance through a personal interview. A stamped, self-addressed postcard was enclosed which asked for a reply, indicating either "yes" that an interview could be arranged, or "no" that the manager was unable to contribute at the present time. Copies of both the letter and postcard are shown in Appendix 4. The exceptions were carriers that the researchers knew personally or through colleagues where use of the letter would not be appropriate.

A Favorable Response Rate

A total of 132 letters were sent to the Class II carriers. Of these, 92 postcards or equivalent letters were returned, a 69.7 percent response rate. Of the responses, 78 (84.8 percent) individuals answered affirmatively that they were willing to be interviewed. During the period July 1975 thru January 1976, the researchers were able to interview over 70 officials of 60 short lines. They also talked with 15 executives of nine Class I carriers in order to obtain their candid appraisal of the chances for success of new short lines assuming responsibility for ex-Class I light density line operations.

In most cases, the interview included an on-site inspection of the short line, in a few instances even a ride in the locomotive during switching and line haul operations. There were occasions, however, where officials were contacted away from the actual operating property, or where the right-of-way was inspected but no interview held. The railroads contacted, their response to the letter of inquiry, and the names of the officials interviewed are listed in Appendices 2 and 3. Figure 1 is a map that shows the degree of coverage of the interviewing program.

■ Interview and on-site inspection

□ Interview only; symbol shown at railroad site

◘ On-site inspection only; no interview

FIGURE 1

CLASS II RAILROADS INTERVIEWED

If there was a bias in the sample, it was due to the interviewing only of individuals willing to contribute to the study. The researchers did not pursue companies which did not reply to the letter of introduction and request for aid, and certainly avoided roads that answered the inquiry negatively.

Interview Content and Procedure

Before conducting the first interview, the researchers developed a list of questions they hoped to have answered. The list is presented in Insert B, as modified slightly by the actual interviewing experience.

The Summary Sheets Prove Burdensome

The first interviews convinced the authors that use of the semiformal format for asking questions, as shown by the information summary in Insert B was too stilted and time-consuming to follow closely. In addition, the desire for an informal atmosphere tended to be lost by the presence of such a document. It was also evident that some of the material possibly could be obtained from carrier data submitted to the Interstate Commerce Commission.

Thus, very early in the program, the interviewers adopted a more informal approach, although keeping in mind the information shown in the summary. The revised procedure placed both researcher and interviewee in more comfortable positions; in fact, the authors feel the interview program was optimally successful both in terms of assistance obtained and the gaining of new friends and possible contacts with future research efforts regarding short line managerial policies and practices.

The Interview Procedure

At the start of each interview, the purpose of the visit was explained and the rail official or officials were assured that the information given would be held strictly confidential. Since there was no specific interviewing format to be used in all cases, the approaches varied considerably from carrier to carrier. Because the researchers did not conduct the interviews as a team, it was up to each to determine how to go about getting the information deemed most appropriate in each situation. Certain carriers stressed certain topics as being particularly important, and the researchers had to decide whether to be led or try to lead in each particular discussion.

Although such a procedure may appear to deny the possibility of gathering information with any degree of uniformity, results were quite the opposite. Some very definite conclusions were gathered, although there were indications that a wide variety of managerial approaches to certain short line problems exist. The interview results will be discussed shortly.

In only one instance did the short line owner insist on being contacted the day before the interview with a set list of questions presented to him for his response during the talk. It was insinuated that without such a format, the time of both parties would be wasted. The researcher and official then agreed mutually that under such circumstances time would be wasted and the interview was cancelled.

INSERT B

RAILROAD INFORMATION SUMMARY

Railroad:______________________________ Date:__________

Contact:______________________________

I. GENERAL CHARACTERISTICS

A. Miles of Track (single versus double)

1. Main line
2. Switch track

B. Stations and Stops

1. Origin
2. Destination
3. Connection/Interchange point(s)
4. Intermediate Points

C. Traffic Handled

1. Nature of service: freight
2. Number of carloads
3. Round trips/day
4. General type of traffic
5. Prearranged or on-demand

D. Operating Conditions

1. Geographic
2. Operating speeds; need for speed generally
3. Allowable gross weight

II. OWNERSHIP/MANAGEMENT/ORGANIZATION/CONTROL

A. Ownership

B. Location of General Offices

C. Management/Personnel/Job Positions

D. Source of Future Managerial Expertise

E. Labor Agreements--opinions on unionized workforce

1. Union affiliation; if applicable
2. Special work rules
3. Crew size; payment arrangements
4. Flexibility in use of labor

F. Shift Work

G. Paperwork Requirements

III. SHIPPER CHARACTERISTICS

A. Customers

1. Names
2. Major industries
3. Types of traffic
4. Carloads per customer
5. Shipment weights and value
6. Destination of cars
7. Problems-demurrage
8. Shipper associations

B. Special Arrangements with Customers (e.g., guarantees, etc.)

C. Special Service Needs (tracing, special cars, etc.)

D. Marketing Efforts (new customers, etc.)
(improvement of service)

IV. PHYSICAL FACILITIES/EQUIPMENT/MAINTENANCE

A. Rails and Right of Way

1. Type of rail

a. Pounds per yard
b. Gross allowable weight
c. Age
d. Opinion on need for certain size rail on short lines

2. Cross-ties

a. Number per mile
b. Treated

3. Ballast
4. Condition of right of way

a. Geography
b. Surface irregularities
c. Track alignment
d. Weeds
e. Other

5. Equipment needed for maintenance of right-of-way and rails

B. Locomotives (number, type, why?)-Condition, Maintenance, Inspection

C. Car Supply; and relationships with Class I Carriers

1. Owned/leased
2. Shipper owned
3. Class I owned
4. Per diem
5. Trailers

D. Physical Facilities

1. Headquarters/offices
2. Engine house/repair facilities/fueling facilities
3. Yards
4. Delivery facilities

a. Stations
b. Public delivery (team) tracks
c. Private sidings
d. TOFC/COFC

E. Car Movement Facilities--and general needs for:

1. Track space for switching
2. Passing sidings
3. Other special services
4. Facilities for classification
5. Tunnels/bridges
6. Crossings

F. Communications Systems--and general needs for:

1. Radios
2. Signals
3. Computer

G. State versus Federal Safety Regulation

V. REVENUE AND COST DATA--relationships with connecting carriers

A. Rates and Revenue Divisions-how published and determined with Class I Carriers)

1. Junction versus interline settlements
2. Divisions versus switching charges
3. Usefulness of minimum revenue per mile figures for prospective short line managers

B. Cost Categories--is a minimum cost per mile useful?

   1. Maintenance of way

      a. Minimum figures useful?
      b. In-house or contract

   2. Maintenance of equipment

      a. In-house or contract

   3. Transportation (labor, fuel, other)

      a. Crew size
      b. Use of radio and/or caboose

   4. Traffic/insurance/safety

      a. Amount of vandalism
      b. Best approach to insurance

   5. General and administrative (management/legal)
   6. Taxes - Payroll/Property
   7. Per diem--total annual expenses
   8. Annual capital cost (including lease costs)

C. Other Income

D. Availability of Financing

E. Trends of Revenue and Profits

F. Views About Subsidy

VI. VIEWS ABOUT THE FORMS OF OWNERSHIP

A. Independent Company

B. Short Lines Under Common Management

C. Shipper-Owned Company

D. Class I Ownership

E. Municipal or State-Owned

F. Railroad As A Municipal Department

G. Shipper Cooperatives

H. Special Purpose Public Agency

I. Public Ownership, Class I Operation by Lease or Contract

J. Public Ownership and Private Operation

VII. VIEWS ABOUT OTHER ALTERNATIVES

A. Shipper Monetary or Physical Assistance

B. Use of Arbitraries Rather than Divisions

C. Indemnification Against Carrier Loss

VIII. FACTORS TO SUCCESSFUL OPERATION OF A SHORT LINE RAILROAD

IX. OBSTACLES TO SUCCESSFUL OPERATION OF A SHORT LINE RAILROAD

The interviews lasted anywhere from three or four hours to all day. The researchers continually were surprised by the graciousness extended to them by their hosts. In many cases, despite the fact that they were taking up the time of the officials visited, the researchers were invited to lunch and were offered a tour of the property. In only a very few instances did the manager seem to try to evade a question or an issue. When this happened, the question was not pursued because a policy of not alienating the railroader was adopted early in the program. While this approach may have introduced a possible bias into the results, the researchers do not feel it to be significant in view of the small number of occurrences.

Short Line Pride

Toward the end of the seven-month program, one short line manager was asked why, on the whole, the industry had been so responsive and helpful. The answer was interesting. He said that there was a great deal of pride among short line managers in view of their accomplishments, particularly with respect to the limited financial resources with which they worked. Most managers firmly believed that they did a better job in terms of productivity than the Class I carriers. Our interviews gave them a chance to tell their story, so to speak, and show off their property. In summary, this cooperation was of extreme value to the attainment of the objective of the study.

The researchers found that this so called "short line pride" was not limited to top management, but permeated the entire organization from general manager to clerk, mechanic, and brakeman. Furthermore, it existed on both union organized and non-organized roads. It was an attitude that many a Class I railroad could envy.

Advice for New Short Lines

The 1974 R. L. Banks report, referred to earlier, concluded there was no "magic formula" for success of a short line. After completing the interview program, the researchers would agree in many respects with this evaluation, for they found that what worked for one small railroad did not necessarily work for another. This was due, at least in part, to the differing managerial philosophies of the owners and operators of the lines. Despite the differences traceable to such independent thinking, the researchers found several areas and issues where there was general agreement among the interviewees. The most important of these are mentioned briefly below. They were discussed at length, of course, in the Handbook.

Revenues and Connecting Carrier Relationships

New short lines must estimate operating revenues based only on existing traffic levels and not overly optimistic forecasts by local booster groups. This is not to say that present shippers cannot be persuaded to increase their rail business, nor that new accounts cannot be aggressively sought by short line management. It does mean that in evaluating the establishment of an independent line, management must not count on traffic which does not exist at present, and may not materialize in the future.

The majority, if not all, of the traffic generated by a short line operation will move in connection with one or more railroads, Class I in all likelihood. The relationship among the short line and these carriers, especially the company with which the small line interchanges cars, will have a profound effect on the success of that carrier. This relationship will be important to many decisions made by short line operators, both those affecting revenues and those affecting costs. In terms of the former category, the amount of the origin to destination revenue received by the short line for its part in the transportation performed will depend on negotiations between the line and the connecting carrier. The revenue can be in the form of a division of total revenue or a set switching charge. The interviewees almost unanimously favored settlement on a division basis, but admitted that under current conditions, the Class I railroads probably would not grant the same divisions as they did in past years, and might not grant them at all. Many short lines would have to survive with the switching charge.

Under these circumstances, the short line might be lured into charging arbitraries, even local rates, on its portion of the haul in an effort to increase revenues. It was evident that such decisions generally would be unfavorable because the penalty nature of such charges could eliminate future new business and force current customers to seek transportation by other modes and/or eventually move to a new location.

If divisions are agreed upon with the connecting carrier, either a junction or interline basis for settlement must be established. Most short line officers were satisfied with their respective situations which included each type of settlement. The major advantage of the junction settlement was a savings in labor for the short line. The advantage of the interline settlement was the opportunity for the short line to make short-term investments *provided* it collected the revenue, meaning the arrangement worked only when freight charge payment terms were prepaid outbound, collect inbound.

Again, negotiations with Class I railroads would be more difficult than they have been in the past when the large lines had more of a monopoly in freight transportation and encouraged the development of connecting independent lines. Now they covet every dollar in revenues and part with each one grudgingly, especially to a short line.

Other possible matters to be negotiated with the connecting carrier include freight car supply, heavy locomotive repairs, switching services at the interchange point, and per diem allowances, to name a few. All managers stressed the importance of the smaller line's being ready to meet its own responsibilities and obligations without asking the larger company for favors or special treatment. The short line should stress its relationship to the Class I as that of a partner, certainly not that of an adversary. As much time and effort needs to be spent by short line management cultivating this relationship as in any other single activity or endeavor.

Tips on Cost Control

In each interview, methods of controlling the major costs of short line operation were discussed. These included the major categories of transportation, maintenance of way and structures, and maintenance of equipment, together with the less significant areas of traffic, insurance, and administration.

Although the expense of operating trains was found to be the single most costly short line activity (accounting for 30 to 45 percent of operating costs on the average), the factor or item upon which short line success will be most dependent apparently is condition of the right-of-way. Furthermore, this condition is not connected closely with the weight of rail used (although a minimum of 80 to 90 pounds per yard is desirable), but rather on effectiveness of right-of-way drainage, the amount of ballast, and tie condition.

Several managers referred to track conditions "getting out of hand" to the point where derailments and extremely low speeds were threatening future profits and in a few cases, the lines' very existence. Many assured us that the first step in evaluating a takeover of a Class I property should be a close, realistic appraisal of the costs to rehabilitate the right-of-way, then those costs needed to maintain it for the desired level of service.

In response to whether maintenance work should be performed by the short line itself or contracted out to independent maintenance specialists, the large majority preferred the in-house arrangement. They admitted, however, that a new line's need for expertise in the area may require the use of contractors in the early life of the carrier, until it can train its own people. This applied to both maintenance of right-of-way and maintenance of equipment.

Discussion of the transportation category primarily involved approaches to train operation and the controversial question of unionization. Regarding train operations and the questions of locomotive type preferred, use of radio, need for a caboose, and optimal crew size, there was never unanimity by the respondents, but the majority argued as follows:

1. The older the engine, the lower the purchase price, but the higher the maintenance cost. Don't buy more horsepower than required by current and foreseeable traffic volume. Don't buy units whose builder has left the field--parts will be hard to find.

2. Radios are essential.

3. A caboose gets in the way, "is another car to walk around," and may provide a place for crew members to sleep when they should be working. There were, however, some strong dissents to not using a caboose.

4. Ideal crew size varies. Many felt two to three to be the maximum required, at least on strictly line-haul operations. Others argued for four, even five, depending on safety requirements in populated areas, amount of switching performed, and need for training of operating personnel. The most popular answer was three; engineer, conductor, and brakeman.

Regarding the union question, the answer was virtually unanimous: avoid unionization if at all possible. The managers for the most part did not resent paying relatively higher wages, and in fact several urged new lines to pay at least the national scale, perhaps higher, to remain unorganized. What they felt to be absolutely essential was for the employees to be flexible, not governed by restrictive work rules or craft lines. Thus, trainmen could perform engine maintenance, right-of-way people could operate the train and paint equipment, etc. Flexibility was the key to a short line's operational success.

Some officials alleged that unionization of their employees probably would put them out of business. Such nonunion carriers worked to offset their lower-than-Class I wage scale by guaranteed work weeks or months, liberal vacation policies, and the assurance that workers would be at home every night and not subject to long periods of work at remote locations which sometimes is a feature of Class I employment.

On the lines which were organized, the supervisors apparently had worked successfully to minimize the problems inherent in organization by craft lines. They seemed to feel that they could reason and work with the union representatives effectively, especially when critical problems developed.

Sources of Future Management

Perhaps the greatest source of variety came when the interviewees were asked where effective management of new short lines would come from. Several mentioned frustrated Class I personnel, but just as many argued against this source because of the possibility of the managers being too specialized and set in their ways. Many said each line must train its own, but admitted the virtual impossibility of such action by a new-formed company. The Handbook referred to the use of Class I people as follows:

> Several successful small line managers, however, have come from trunk lines. They came with experience in one phase of railroading, such as rebuilding/maintenance of track, or train operations, yet were sufficiently versatile to adapt to the many faceted requirements of local railroad management. Not a single former trunk line manager interviewed wanted to return to the large carrier, nor regretted the move. The variety of the job, if more demanding than previously, was also more challenging and rewarding. One suggestion was that new small carriers look for former trunk-line managers of branch lines, as opposed to general office or headquarters personnel. Operation of branch lines often required the varied talents needed by small lines.

Finally, the respondents warned new short lines of the growing number of inexperienced consulting firms that suddenly have become interested in the independent short line business:

> The interviews convinced us that one source to beware of was professional management firms, with little or no railroad experience, that will offer to set up and operate a line for a percentage of the profits and/or a healthy management fee. This does not refer to railroad specialists and consultants, but rather to relative newcomers to the railroad field who see potential profit in it. This is not to say that such firms are not capable or trustworthy, it is merely to advise that local interests check out thoroughly a potential consultant's "track record" (no pun intended) before committing themselves to an expensive contract.

The Interviews and the Contribution of the Handbook

The above conclusions represent a sampling of the interview results. The researchers feel that the interview program was successful and provides the unique quality of the Handbook. Its success, of course, was due to the virtually complete cooperation of those who were willing to help us. To them we extend sincerest thanks. To prospective short line operators we recommend studying closely the suggestions and warnings of these experienced individuals. Those who do not, proceed at their own risk.

III. ANALYSIS OF CLASS II CARRIER DATA

Objectives and Overview

The extensive schedule of interviews provided many valuable insights into the various alternatives to abandonment under consideration. Although those efforts uncovered a variety of information regarding the costs of operating a light density line independent of Class I ownership, the ideas were primarily of a general nature, and not appropriate for development of a precise procedure for cost estimation. In acknowledging lack of such information, it was felt that a thorough investigation and analysis of cost data respective to existing short-haul operations would be of value. For this reason data were obtained from the Annual Report to the Interstate Commerce Commission as filed by a number of Class II carriers for 1974. Once such data were acquired, coded, keypunched, and transformed when necessary, a rigorous investigation was conducted. The objective was to develop a procedure to be used for estimation of the costs associated with independent operation of a short-haul rail line.

The types of costs which were considered included all of those categorized by the Interstate Commerce Commission as "railway operating" expenses. In particular, it was necessary to include those associated with the following:

- Maintenance of Way and Structures;
- Maintenance of Equipment;
- Traffic;
- Transportation--Rail Line; and
- General.

With the available data, equations were developed which permit the estimation of each of these types of costs with a stated reliability. Although it was intended originally that the estimates of each of the above five cost categories be added together to result in an estimate of the "grand total of railway operating expenses" respective to a given line, a sixth relationship was developed which allows the single-equation prediction of that "grand total."

Each of the predictive equations has a statistically measurable validity; however, their general use is strongly cautioned because of the peculiarities of any given light density line. Actual costs may in fact be significantly higher or perhaps lower than the equations would indicate. Such a limitation, however, is relevant to the interpretation of the results of any estimation procedure, and is not unique to the equations which were developed with respect to railway operating costs.

The organization of this section will follow closely the research methodology which was implemented to achieve the goals and objectives described above. The major types of necessary activity included those respective to the following:

- Data Acquisition;
- Data Preparation; and
- Data Analysis.

The first discussion which follows includes the particular data needs and how such needs were satisfied. The second concerns a description of the various steps taken which were necessary to assure that the data were in a form suitable for analysis. The final activity was that involving the investigations and analyses which led to a greater understanding of the various costs and the factors relevant to their estimation. The final results of this procedure were the derivations of several quantitative relationships which are appropriate to the task of cost estimation. Each of those equations subsequently will be presented and interpreted.

Acquisition of Data

In order to study the factors which affect the costs associated with a short-haul railroad operation, it was first necessary to define the types of information which would be important to such an investigation. Table 1 shows the various categories of information which were desired. Included are those related to railway operating expenses; rail line characteristics; physical characteristics of the operation; employees, service and compensation; and rail line operation. The main objectives of the analyses were to explain the various types of railway operating expenses associated with rail line operations.

Implementation of the methodology required that the above types of data be made available respective to a number of existing short-haul carrier operations. A majority of the information needs were found to be available for such carriers on selected pages of their Annual Report to the Interstate Commerce Commission, Form R-2 (Class II Railroads). Appendix 5 exhibits copies of the pages of interest from that report.

Having thus determined the source of such information, it was necessary to identify the carriers for which the data would be acquired. As a starting point, all carriers listed in Appendix 3 were considered to be of interest. That appendix indicates that there were a total of 196 Class II line-haul carriers which were neither controlled nor operated by Class I carriers. Elimination of the larger carrier bias was considered essential in selecting the short-haul carriers for study. Thus, each of the 196 carriers was subjected to a rigorous scrutiny to determine if there were certain ones for which data would not be desired. For several reasons, 26 of the 196 were considered unsuitable for analysis: 17 were involved in passenger operations; four did not operate throughout the entire year of 1974 (the latest year for which annual report data was available from the ICC); one was a switching road; one had evidence of Class I ownership; and three were dropped from consideration for other reasons.

Thus, the Interstate Commerce Commission was requested to provide the pertinent annual report data for 170 carriers for the year ending December 31, 1974. Appendix 3 indicates those particular carriers. It was found

TABLE 1

TYPES OF DATA NEEDS

RAILWAY OPERATING EXPENSES
- Maintenance of Way and Structures
- Maintenance of Equipment
- Traffic
- Transportation Rail-Line
- General

RAIL LINE CHARACTERISTICS
- Location
- Ownership Type
- Mileage Operated
- Connections with Other Carriers, etc.

PHYSICAL CHARACTERISTICS OF THE OPERATION
- Weight of Rail
- Number of Crossties
- Gauge of Track
- Types of Power Equipment
- Ownership of Freight Cars, etc.

EMPLOYEES, SERVICE, AND COMPENSATION
- Executives, Officials, and Staff Assistants
- Professional, Clerical, and General
- Maintenance of Way and Stores
- Transportation - Yardmasters, Switch Tenders, and Hostlers
- Transportation - Train and Engine

RAIL LINE OPERATION
- Train-Miles
- Locomotive Unit-Miles
- Car-Miles
- Revenue and Nonrevenue Freight Traffic
- Traffic by Commodity Types, etc.

subsequently that the data were available for only 148 of the 170 carriers requested (see Appendix 3). Figure 2 shows the number of carriers by state for which data were received. The information received was considered as the primary data base for use in the analysis which followed.

It should be acknowledged that some of the additional information needs were fulfilled by reference to American Short Line Railway Guide written by Edward A. Lewis, and published in 1975 by the Baggage Car, Strasburg, Pennsylvania 17579. This source provides a substantial amount of current data respective to all existing Class II railroad operations.

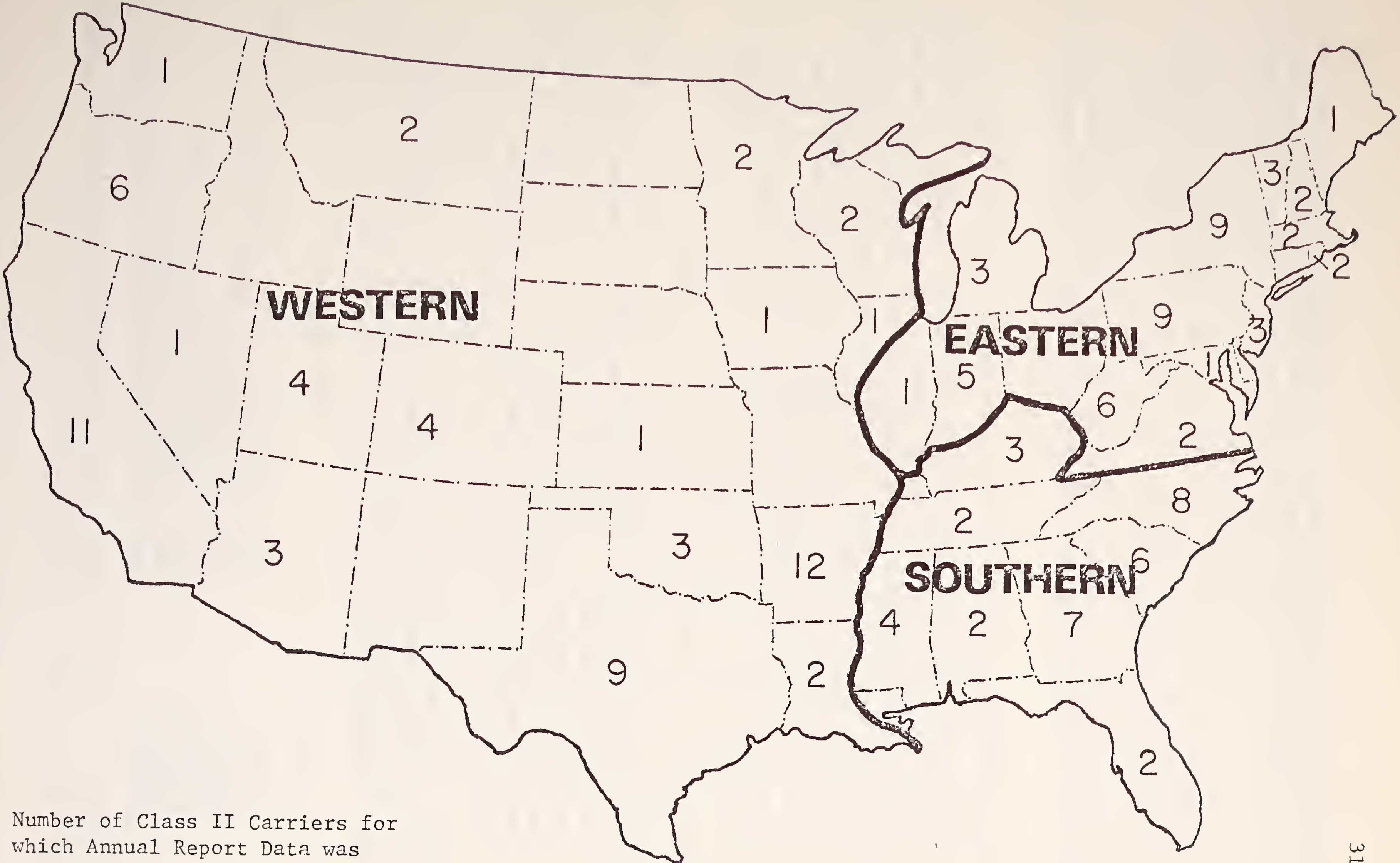
Preparation of Data for Analysis

Once the data were acquired, there were several tasks to be accomplished in order to assure that the analysis could be conducted efficiently. It was necessary that the relevant information be made available in machine-readable form for input to The University of Tennessee's IBM 360/165 computer system. Additional considerations were the particular requirements of the software package to be used for the analysis. This project placed great reliance on the capabilities of the Statistical Package for the Social Sciences (SPSS) system of computer programs.

The SPSS package is an integrated system of computer programs which allows many different types of data analysis to be performed in an efficient manner. It offers a wide variety of commonly used statistical routines. The purposes of this study required significant use of those related to: the construction of simple frequency distributions; the computation of nonparametric correlation coefficients; and the executions of simple linear and multiple regression analyses.

The first task to which attention was devoted was that of coding the data directly from the respective sources. Each of the carriers included was given a unique identification number for reference purposes, and all data pertinent to each carrier were entered onto general use data-coding forms. In the case of information which was obtained from reproduced pages of carriers' annual reports, a manual effort was employed to accomplish the necessary coding. Appendix 6 to this report contains a copy of the "coding form" which was developed to encourage consistency and accuracy. An inspection of that form will reveal that each particular variable is named and described, and that the source of each type of data and the format in which coded are explicitly identified. Also indicated are the coding formats which were used to identify particular pieces of information which were unavailable for certain carriers. Values which were designated as "missing" were largely due to the failure of some railroads to report information regarding their operations in a manner consistent with ICC requirements.

The second task involved transforming some of the raw data into forms which would be more relevant for the analysis which was to follow. For example, it was necessary to express a variety of cost data on a per-mile



Number of Class II Carriers for
which Annual Report Data was
Received

FIGURE 2

GEOGRAPHICAL LOCATIONS OF CARRIERS INCLUDED IN DATA ANALYSIS

basis, as well as to compute totals for certain types of information and to construct a number of "dummy" variables. These and other data transformations which were made are indicated on the code sheet shown in Appendix 6.

Following the coding of raw input data and the construction of transformed variables as necessary, all information was keypunched in binary format onto 80-column punched-cards. All data were then stored using online disk space for efficient retrieval and input to the SPSS package.

Appendix 7 shows in summary form all of the particular variables available for analysis, along with brief descriptions of their respective meanings.

Analysis of the Data

This particular phase of the research methodology required that each of the relevant variables be studied intensively, and that efforts be made to understand the relationships among various sets of those variables. The overall objective was to produce a number of cost-estimating equations which would be of value when attempting to predict likely magnitudes of costs associated with the operation of a light density line independent of Class I ownership. As previously mentioned, "historical" data were obtained respective to the operations of 148 Class II line-haul carriers which were neither owned nor operated by a larger carrier. It was hoped that such a study of past experiences would provide significant insight into the potential levels of each of the relevant types of costs.

Multiple regression was the statistical technique selected for developing the equations. This tool generally allows one to analyze the relationship between a dependent or criterion variable and a set of independent or predictor variables. As used here, the technique may be described best as one which provides descriptive ability; that is, it allows a study of the linear dependence of one variable on others. In addition, use of this approach permits the efficient computation of quantitative measures which may be used to assess the predictive accuracy of the entire equation, as well as measures which evaluate the individual contributions of each independent variable toward an explanation of variation in the dependent variable. The six dependent variables used in this study are shown below along with brief descriptions of their respective meanings:

Variable	Description
TOTMOWS	TOTAL MAINTENANCE OF WAY AND STRUCTURES $000
TOTMOE	TOTAL MAINTENANCE OF EQUIPMENT $000
TRAFFIC	TRAFFIC EXPENSES $000
TOTTRANS	TOTAL TRANSPORTATION RAIL LINE $000
TOTGEN	TOTAL GENERAL EXPENSES $000
GRANDTOT	GRAND TOTAL RAILWAY OPERATING EXPENSES $000

Reference to Appendix 5 will provide additional information as to the specific types of expense items included in each of the above.

The initial list of independent variable candidates would be too lengthy to reproduce in the text pages of this report. The entire range of such possibilities however, may be consulted in the contents of Appendix 7, which enumerates and describes all of the study variables.

Preliminary Considerations

The first major step taken was to construct simple frequency distributions for each of the study variables. In addition, certain descriptive statistics were computed for each variable. Included were the mean, median, mode, standard error, standard deviation, variance, maximum, minimum, range, and measures of kurtosis and skewness.

Considerable attention was then devoted to a study of those distributions, and the notion of using all data for each of the 148 carriers was reconsidered. A decision was made at that point to eliminate from further consideration all carriers having gross freight revenues in 1974 of $1,000,000 or more. Because the analysis was aimed at developing cost equations which would be appropriate to the independent provision of service over light density lines, it was felt that very few of such potentially new lines would be capable of generating revenues of such magnitude. The elimination of all carriers having gross freight revenues of equal to or greater than $1,000,000 reduced the list of carriers by 43, or to a new total of 105.

Examination of the frequency distributions constructed for variables respective to 105 carriers revealed three additional carriers which were eliminated from further study. One was dropped because its main track mileage of 161 miles was substantially greater than any of the other carriers (the next highest mileage was 67 miles). Two other carriers having respective operating ratios (operating costs as a percent of operating revenues) of 10 and 973 were likewise deleted from further consideration. Such ratios were considered to be rather unusual in light of the range of 35 to 315 exhibited by other of the 105 carriers.

The remaining portions of the analysis were then based on the resulting sample of 102 Class II line-haul carriers having operating revenues in 1974 of less than $1,000,000. Appendix 8 to this report provides frequency distributions for each of the many variables which were investigated. Included are various summary statistics respective to each variable.

Methodology

Investigations of the one-way frequency distributions described above provided valuable insight into those variables which ultimately would be prime candidates for inclusion as independent variables in the multiple regression analysis. The SPSS procedure referred to as "Breakdown" was utilized to study the values of the respective dependent variables as the sample of 102 carriers was segmented into different groups according to the values of certain independent variable candidates.

Nonparametric correlations as computed by the software package also were studied. In particular, frequent use was made of the procedure which allowed calculations of Spearman rank-order correlation coefficients for a wide variety of variable pairs. While the computed value of any such coefficient may range from -1.0 to +1.0, variable pairs for which such values approach the former are interpreted to indicate a strong negative relationship, whereas strong positive relationships are exhibited by coefficient values approaching the latter. In addition, the computer program permitted the application of two-tailed tests of significance to each coefficient thus computed. Use of this procedure provided extensive flexibility in studying interrelationships among variables.

Following such initial phases of analysis, attention was devoted to the functional form of the actual cost-estimating equations. Several objectives were necessary to consider. First, each equation should contain a variety of variables which would help to explain variation exhibited by the respective dependent variables. Second, all independent variables should represent measures which could be estimated with some degree of accuracy prior to implementing an independent carrier operation. Third, it was desired that the regression analyses respective to each dependent (cost) variable be conducted in a consistent manner. This was necessary in order to assure that the various cost-estimating equations all would require similar, perhaps identical in some cases, data inputs. Finally, each of the resulting equations was to be evaluated in terms of its statistical validity.

Five types of independent variables were ultimately selected for inclusion in the multiple regression analyses: Carrier location; Ownership; Main track mileage; Traffic volume; and one other depending on the particular type of cost being estimated. Each of these will be discussed in turn.

Carrier Location. The geographic location for each of the 102 carriers studied was determined by reference to the map of ICC districts which is included in Figure 2. Of that number of carriers, 38 were located in the Eastern District, 25 in the Southern, and 39 in the Western. There were other methods of locational segmentation which were considered, but each was either too arbitrary, or categorized the carriers into so many areas that any resulting statistical analysis would lose much of its validity.

For purposes of the regression analysis, three "dummy" variables were constructed respective to a carrier's location. They were:

EASTERN - Carrier Located in Eastern District;
SOUTHERN - Carrier Located in Southern District; and
WESTERN - Carrier Located in Western District.

For each of the carriers investigated, the coded value of these variables was 1.0 for the territory in which it was located, and 0.0 for the other two variables. Since the multiple regression equations were to have "constant" (or intercept) terms included, it was necessary to drop one of the three dummy location variables from consideration in any given computer

run. In addition to the fact that this is a commonly accepted procedure when using dummy variables, it is obvious that knowledge of whether a carrier is located in one of two given territories also will indicate whether or not it is located in the third.

Ownership. Three different types of ownership were identified: Independent; Shipper/Industry; and Governmental unit. There were 40 carriers exhibiting independent ownership; 57 which were owned at least in part by shippers and/or local industry; and five which were owned by the local or state governmental units. Similar to the way in which the location possibilities were handled, ownership status required the creation of three dummy variables:

INDEP - Carrier Ownership - Independent
INDUSTRY - Carrier Ownership - Shipper - Industry
GOVT - Carrier Ownership - Governmental Unit

The value coded for each of these carrier variables was 1.0 if yes, 0.0 if no.

Main Track Mileage. Early stages of the analysis provided a strong indication that this variable would be helpful in attempting to explain a variety of cost data. The relevant measure computed for each carrier was the total mileage of single or first main track plus that of second and additional main tracks. Excluded was mileage associated with passing tracks, cross-overs, turn-outs, and way and yard switching tracks. The variable included in the analysis was as follows:

TRAKMAIN - Main Track Mileage - Miles

The sample of 102 carriers revealed that mileages ranged from 1 to 67, the mean and median of which were 14.08 and 10.25, respectively.

Traffic Volume. There are a variety of ways in which this category of variable may be measured, the most appropriate of which is carloads moved. Unfortunately, the ICC does not require that carriers filing annual reports indicate the magnitudes of such a variable. Although such carriers are required to submit data concerning car-miles, it is difficult to transform such a measure into the actual number of loaded freight cars handled without making a perhaps unreliable assumption regarding average length of haul. Since all cars do not necessarily travel the entire length of a given line, an assumption that they did so would introduce an unnecessary bias. To overcome such shortcomings, the total tons of revenue freight carried by the respective railroads in 1974 was used as the measure of traffic volume:

TOTTNSRV - Total Tons Revenue Freight Carried 000

Although this variable was coded in thousands for input to the computer analysis, its actual value was seen to range from as low as 1,000 tons to as high as 1,039,000 tons. The mean tons of revenue freight was 212,592, and the median was 120,500.

Other. Depending on the particular dependent variable being investigated, a fifth independent variable was introduced from the following list:

XTIESREP - Number of Ties Replaced Per Mile
LOCMILES - Total Locomotive Unit-Miles 000
NUMCONNS - Number of Connecting Carriers
ADMIN - Administration $000

Results of the previously-discussed correlation analyses indicated that the number of ties replaced per mile of track in 1974 would be helpful in explaining expenditures for Maintenance of Way and Structures, and also for the Grand Total of Railway Operating Expenses. Such a variable is interesting in that once a predictive equation has been developed, value inputs for estimation purposes may be based on the category of track class desired as indicated by Federal Railroad Administration (FRA) track standards. Table 2 provides a summary of such standards for FRA Class I (10 mph maximum speed), FRA Class II (25 mph maximum speed), and normalized track. As can be seen, these three classes will require yearly replacements of 34, 54, and 150 ties per mile, respectively, assuming a conservative average tie-life of 20 years.

Locomotive unit-miles was used as an additional independent variable in the estimation of costs associated with Maintenance of Equipment and Transportation - Rail Line. The values of this variable were determined by adding together the number of unit-miles reported for road service and train and yard switching. Once the predictive equations have been developed, an estimate of locomotive unit-miles may be developed for a proposed operation by using the following computational formula:

$$\begin{aligned} \text{LOCMILES} &= \text{Unit-Miles Road Service} + \text{Unit-Miles Switching} \\ &= 2 \times L \times F \times 52 + (.35) \times 2 \times L \times F \times 52 \\ &= (1.35) \times 2 \times L \times F \times 52 \end{aligned}$$

where L = length of line in miles

2L = round-trip mileage

F = service frequency (round-trips per week)

52 = weeks per year

Such an estimate is based on operating frequency, length of line, and an adjustment (.35) for average switching miles as developed from the data available.

The number of other carriers with which connections were made varied from one to five for the carriers investigated. It was found that 74 of the

TABLE 2

FRA TRACK STANDARDS AND
NECESSARY TIE RENEWAL RATES[a,b]

		CLASS OF TRACK I	CLASS OF TRACK II	Normalized[c]
Maximum distance (in inches) between non-defective ties (center to center)		100	70	21
Minimum number of non-defective ties per 39 feet of track		5	8	22
Minimum number of good ties required per mile		677	1083	3000
	Average tie life (when installed)			
Average necessary tie replacements per mile per year to maintain track standard	10 yrs.	68	108	300
	20 yrs.	34	54	150
	30 yrs.	23	36	100

[a]For a complete statement of FRA Track Standards see the following references in the Federal Register: 36 FR 20336; 38 FR 873; and 38 FR 1508.

[b]The table construction assumes a total of 3000 ties per mile of track.

[c]Track is maintained on a normalized basis when one-half of the useful life of the track components remain. Theoretically, this standard of maintenance will preserve the entire capital investment in perpetuity.

102 had only one carrier with which freight was interchanged, and that there were only three carriers having more than three connections. This variable was incorporated into the multiple regression analysis which pertained to the estimation of Traffic expenses.

Finally, there was strong evidence to indicate that expenditures respective to administration would help substantially in explaining General Expenses. Components of the administration expense are salaries and expenses of general officers, clerks, and attendants; general office supplies; and legal expenses. Other notable general expenses are insurance and other expenses such as employees' health and welfare benefits, pensions, and stationery and printing.

In summary, the above discussions of independent variable categories represent end results of rather extensive preliminary investigations. Although there was a large number of variable candidates which could have been included in the above categories, the results of the preliminary analyses strongly indicated that those discussed above were likely to be consistently valuable in explaining variation in each of the respective dependent variables.

Regression Analyses--Intermediate Results

This section of the report presents the empirical results of application of the technique of multiple regression to the task of deriving cost-estimating equations. The general form of the regression used is:

$$Y' = A + B_1X_1 + B_2X_2 + \ldots + B_kX_k$$

In this equation, Y' represents the estimated value for Y, the dependent variable, A is the Y intercept, and the B_i are the regression coefficients respective to each independent variable. The functional form implies that once such a relationship has been derived by empirical analysis, the value of the dependent variable may be estimated in a given case by adding to the constant term (A) the sum of a number of products each resulting from the multiplication of an independent variable value and the corresponding regression coefficient. The general form may be expressed more concisely as follows:

$$Y' = A + \sum_{i=1}^{k} B_iX_i$$

For convenience, all variables to be included in the intermediate analyses are shown in Table 3. They have been divided into dependent and independent variables, respectively. Such variables are in the order in which they were discussed in the immediately preceding section regarding methodology.

TABLE 3

SUMMARY OF VARIABLES INCLUDED IN MULTIPLE REGRESSION ANALYSES

DEPENDENT

TOTMOWS	TOTAL M O W AND STRUCTURES $000
TOTMOE	TOTAL MAINTENANCE OF EQUIPMENT $000
TRAFFIC	TRAFFIC EXPENSES $000
TOTTRANS	TOTAL TRANSPORTATION RAIL LINE $000
TOTGEN	TOTAL GENERAL EXPENSES $000
GRANDTOT	GRAND TOTAL RWY OPER EXPENSES $000

INDEPENDENT

EASTERN	CARRIER LOCATED IN EASTERN DISTRICT
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT
INDEP	CARRIER OWNERSHIP - INDEPENDENT
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY
TRAKMAIN	MAIN TRACK MILEAGE - MILES
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000
XTIESREP	NUMBER OF TIES REPLACED PER MILE
LOCMILES	TOTAL LOCOMOTIVE UNIT-MILES 000
NUMCONNS	NUMBER OF CONNECTING CARRIERS
ADMIN	ADMINISTRATION $000

Table 4 presents the results of the individual multiple regression analyses (copies of actual computer output are shown in Appendix 9). Information relating to the estimation of each respective dependent variable appears in the appropriately labelled column of that table. For example, the first column shows the results of the analysis for which total maintenance of way and structures was the dependent variable, the second for total maintenance or equipment, etc. While the rows are identified by the independent variables which were of interest, the body of the table includes information in each cell regarding the coefficients which were computed for the values of independent variables in the respective regressions. In addition, the lower part of the table provides data of a summary nature pertaining to each equation.

The first of the equations produced will be described in detail to allow more meaningful interpretation of the results achieved. The form of the cost-estimating equation is as follows:

$$\begin{aligned}\text{TOTMOWS} = 19.619 &- \underset{(10.656)}{8.138}\ \text{EASTERN} - \underset{(11.667)}{9.066}\ \text{SOUTHERN} \\ &- \underset{(20.029)}{26.731}\ \text{INDEP} - \underset{(19.743)}{30.036}\ \text{INDUSTRY} \\ &+ \underset{(0.378)}{2.679}\ \text{TRAKMAIN} + \underset{(0.019)}{0.114}\ \text{TOTTNSRV} \\ &+ \underset{(0.053)}{0.182}\ \text{XTIESREP}\end{aligned}$$

Keeping in mind that TOTMOWS is expressed in thousands of dollars, any estimate derived from use of this equation should be adjusted accordingly. Referring to this equation and the first column of Table 4, the constant or intercept term is 19.619. The coefficients for the independent variables, EASTERN, SOUTHERN, etc., are -8.138, -9.066, etc., respectively. The numbers in parentheses are the standard errors respective to each of the calculated regression coefficients. They are helpful in evaluating whether the coefficient values are significantly different from zero in a statistical sense. Independent variable coefficients which are in fact significantly different from zero (as evaluated by use of the partial F-ratio) are appropriately noted in the particular cells of Table 4. Included for TOTMOWS are those respective to TRAKMAIN, TOTTNSRV, AND XTIESREP, all of which were significant at the .01 level. The other variable coefficients (i.e. for EASTERN, SOUTHERN, INDEP, and INDUSTRY) are not significant, and hence their inclusion in the equation constitutes an error in specification of the functional form of the equation. Because the results currently being discussed were "intermediate" in nature, there was ample opportunity to make necessary changes before the development of "final" results.

The lower part of Table 4 shows a variety of information which is important to an understanding of the statistical validity of the various

TABLE 4

INTERMEDIATE RESULTS OF REGRESSION ANALYSES

		DEPENDENT VARIABLES					
		TOTMOWS	TOTMOF	TRAFFIC	TOTTRANS	TOTGEN	GRANDTOT
INDEPENDENT VARIABLE COEFFICIENTS	CONSTANT	19.619	5.328	-7.289	29.292	4.562	81.505
	EASTERN	-8.138 (10.656)	4.565 (7.372)	-0.025 (1.867)	-12.221 (9.611)	2.802 (2.820)	-14.140 (29.712)
	SOUTHERN	-9.066 (11.667)	-3.337 (8.051)	4.444 (2.039) SIG.05	-20.943 (10.497) SIG.05	3.262 (3.099)	-24.549 (32.529)
	INDEP	-26.731 (20.029)	0.957 (13.740)	5.182 (3.458)	-10.725 (17.913)	-1.579 (5.226)	-57.791 (55.844)
	INDUSTRY	-30.036 (19.743)	6.969 (13.565)	1.948 (3.426)	1.839 (17.686)	-1.589 (5.163)	-45.652 (55.047)
	TRAKMAIN	2.679 (0.378) SIG.01	-0.383 (0.280)	0.176 (0.069) SIG.05	-1.007 (0.365) SIG.01	0.059 (0.100)	4.634 (1.055) SIG.01
	TOTTNSRV	0.114 (0.019) SIG.01	0.028 (0.017)	0.006 (0.003) SIG.10	0.137 (0.022) SIG.01	0.013 (0.005) SIG.025	0.587 (0.052) SIG.01
	XTIESREP	0.182 (0.053) SIG.01					0.194 (0.149)
	LOCMILES		1.941 (0.254) SIG.01		3.683 (0.331) SIG.01		
	NUMCONNS			4.492 (1.231) SIG.01			
	ADMIN					1.069 (0.047) SIG.01	
SUMMARY INFORMATION	Number of Observations	86	86	86	86	86	86
	R-Square	0.613	0.660	0.409	0.864	0.904	0.701
	F-Ratio	17.661 SIG.01	21.600 SIG.01	7.723 SIG.01	71.079 SIG.01	105.098 SIG.01	26.067 SIG.01
	Standard Error	40.923	28.345	7.176	36.954	10.828	114.098
	Dependent Variable Mean	67.695	37.507	6.811	81.034	37.035	230.438

equations. In the case of estimation of total maintenance of way and structures expenses, there were 86 carriers for which data were used to develop the relationship described above. Although this is somewhat short of the "102" carriers for which data were available, the difference was due to a failure by some carriers (16 to be exact) to report all necessary information in their annual reports. The R-square value of 0.613 indicates that the equation was successful in explaining 61.3 percent of the variation in the dependent variable TOTMOWS. The entry in the next row shows that the computed F-ratio of 17.661 is significant at the .01 level, indicating that the set of particular independent variables selected for inclusion was significant in explaining variation in the dependent variable. Finally, the standard error 40.923 is actually the standard deviation of actual values of the dependent variable (TOTMOWS) from the values predicted by the equation. For reference purposes, the mean value of the dependent variable computed for the sample of 86 carriers is shown on the bottom line of Table 4. In addition, Table 5 has been included to show the means and standard deviations for all variables included in the analyses.

The other columns of Table 4 should be reviewed in a similar manner. The most striking observation to be made is that overall, only a small number of variable coefficients were statistically significant. In fact, of the 42 coefficients (exclusive of the constant term) appearing in the table, only 16 were significant at the .10 level or more. Thus, any attempt to reduce this specification error definitely would affect the consistency of variable inclusion which was desired among the various equations. The existence of such a number of non-significant values required the omission of certain variables (i.e. those least significant) from the final regression analysis.

On the positive side, all equations were significant in their ability to explain dependent variable behavior, and the R-square values which ranged from 0.409 to 0.904 are generally acceptable for this type of research. It was interesting to note that the dummy variables constructed with respect to location and ownership were not very helpful in general, but that the remaining selected independent variables provided a significant contribution to the explanation.

In summary, the intermediate results discussed in this section provide sufficient indication that the relationships studied were in fact valid, but that their functional forms should be subjected to a thorough re-evaluation. It was necessary to incorporate certain changes to assure that each equation was specified properly.

Regression Analyses--Final Results

A variety of approaches were used in order to improve the intermediate results. The correlation matrices originally computed for all relevant variable pairs were reviewed, as well as the frequency distributions for all variables. It was concluded that the regression results previously discussed had taken advantage of the major types of variables which were

TABLE 5

SUMMARY STATISTICS FOR VARIABLES
INCLUDED IN MULTIPLE REGRESSION ANALYSES

VARIABLE[a]	MEAN	STANDARD DEV	CASES
TOTMOWS	67.6953	63.0269	86
TOTMOE	37.5070	46.5453	86
TRAFFIC	6.8105	8.9444	86
TOTTRANS	81.0337	96.1611	86
TOTGEN	37.0349	33.5025	86
GRANDTOT	230.4383	199.7320	86
EASTERN	0.3721	0.4862	86
SOUTHERN	0.2558	0.4389	86
INDEP	0.3953	0.4918	86
INDUSTRY	0.5465	0.5008	86
TRAKMAIN	14.5465	12.2586	86
TOTTNSRV	207.7791	246.3794	86
XTIESREP	96.9397	87.0024	86
LOCMILES	13.8721	17.5836	86
NUMCONNS	1.3605	0.7180	86
ADMIN	26.7046	28.3689	86

[a]Reference to Table 3 will indicate the appropriate unit of measurement (e.g. thousands of tons, thousands of dollars, etc.) for each variable.

related to the particular dependent variables of interest. It would have been possible to add more variables of the types already considered, but the possibility of extreme muticollinearity among independent variables was a chief deterrent. If variables were added which were highly related to variables already in the equation, it would have been almost impossible to separate the influence of each on the dependent variables. R-square values would have been likely to increase, but the presence of this type of specification error would have provided results with greatly reduced meaning. Other attempts at producing more valuable and efficient relationships included the use of step-wise (both step-up and step-down) regression procedures as well as experimenting with various combinations of independent variables in the equations.

The results of the above efforts are shown in Table 6. Copies of the computer generated output appear in Appendix 10. Although the format of the table is identical to that used in Table 4, there are considerably fewer entries in total, so it is obvious that the number of independent variables included in the final cost-estimating equations has been reduced. Reference to the R-square value for each equation, however, indicates that such simplification did not reduce the explanatory ability of the remaining independent variables. A comparison of the F-ratios and standard errors as pertain to the intermediate and final results indicates that the overall statistical validity of each equation has increased, and that estimation based on use of the final results may be made with greater precision. Each of the particular equations developed will be examined in detail and interpreted as is appropriate.

Total Maintenance of Way and Structures. The form of the equation which may be used to predict this type of expenditure is:

$$\begin{aligned} \text{TOTMOWS} = -14.916 &+ \underset{(0.371)}{2.738}\ \text{TRAKMAIN} \\ &+ \underset{(0.018)}{0.114}\ \text{TOTTNSRV} + \underset{(0.052)}{0.198}\ \text{XTIESREP} \end{aligned}$$

As would be expected, larger expenditures are suggested for operations which have greater main track mileage, haul higher tonnages of freight, and which pursue more intensive policies regarding maintenance of way. Because TOTMOWS is expressed in thousands of dollars, an increase of one main track mile will increase expected expenses by $2,738, and the carrying of each additional thousand tons of freight will add $114 (at 1974 price levels). In addition, the setting of track standards at FRA Class I (average renewal of 34 ties per mile per year) will contribute $6,732 (34 x 0.198 expressed in thousands) to the total. FRA Class II (54 ties) will add $10,692, and normalized (150 ties) $29,700. It should also be noted that each of the independent variables in the equation were seen to be highly significant on the basis of partial F-tests.

In terms of overall explanatory ability, the R-square value indicated that the relationship shown accounted for 59.9 percent of the variation in total expenses for maintenance of way and structures. Although the

TABLE 6

FINAL RESULTS OF REGRESSION ANALYSES

		DEPENDENT VARIABLES					
		TOTOMOWS	TOTMOE	TRAFFIC	TOTTRANS	TOTGEN	GRANDTOT
INDEPENDENT VARIABLE COEFFICIENTS	CONSTANT	-14.916	5.888	-5.554	7.108	5.806	15.318
	EASTERN						
	SOUTHERN			4.469 (1.775) SIG.025	-15.590 (9.546) SIG.15		
	INDEP			3.427 (1.590) SIG.05			
	INDUSTRY						
	TRAKMAIN	2.738 (0.371) SIG.01		0.176 (0.068) SIG.025			4.830 (1.028) SIG.01
	TOTTNSRV	0.114 (0.018) SIG.01	0.031 (0.016) SIG.10	0.006 (0.003) SIG.10	0.150 (0.022) SIG.01	0.012 (0.005) SIG.025	0.588 (0.051) SIG.01
	XTIESREP	0.198 (0.052) SIG.01					0.234 (0.144) SIG.15
	LOCMILES		1.817 (0.228) SIG.01		3.367 (0.313) SIG.01		
	NUMCONNS			4.457 (1.216) SIG.01			
	ADMIN					1.076 (0.044) SIG.01	
SUMMARY INFORMATION	Number of Observations	86	86	86	86	86	86
	R-Square	0.599	0.643	0.407	0.845	0.902	0.694
	F-Ratio	40.834 SIG.01	74.776 SIG.01	10.973 SIG.01	149.182 SIG.01	381.442 SIG.01	61.924 SIG.01
	Standard Error	40.634	28.140	7.101	38.526	10.620	112.532
	Dependent Variable Mean	67.695	37.507	6.811	81.034	37.035	230.438

F-ratio indicates significance of the equation at the .01 level, the practice of deferring maintenance as pursued by some carriers may have resulted in less valid results than would have been obtained otherwise. Also, "extraordinary" costs incurred by some carriers, particularly with regard to maintenance of structures, surely affected the variation which remained unexplained by the equation. The equation presented, however, should prove to be of value for estimation purposes in its present form.

Total Maintenance of Equipment. The relationship derived for estimating the magnitude of this category of expense contains fewer independent variables:

$$\text{TOTMOE} = 5.888 + \underset{(0.016)}{0.031}\ \text{TOTTNSRV} + \underset{(0.228)}{1.817}\ \text{LOCMILES}$$

The total tons of revenue freight carried is also included in this equation (as it is in each of those remaining to be discussed). Its significance was measured at the 0.10 level, and its meaning for estimation purposes is that expenditures for maintenance of equipment are expected to increase by $31 for each additional thousand tons carried. The total locomotive unit-miles variable, however, contributes $1,817 per thousand miles to predicted maintenance of equipment expenditures. Although only two independent variables (and the constant term) were included in this regression, it was able to explain approximately 64 percent of variation in expenditures for maintenance of equipment. It had been anticipated that data regarding number of locomotives and their total horsepower per line would have contributed significantly to explanation. Investigations, however, indicated that most of their respective abilities to contribute had been captured by the two variables which were included in the equation.

Traffic. This particular variable was perhaps the most difficult to explain, largely because it exhibited the least variability of all dependent variables (see Table 5). In addition, expenditures in this category generally represent a very small percentage of total operating costs. The average for 86 carriers was $6,811, but about 10 percent of those studied indicated no traffic expenses at all. The following equation was developed for estimating this type of expense:

$$\text{TRAFFIC} = -5.554 + \underset{(1.775)}{4.469}\ \text{SOUTHERN} + \underset{(1.590)}{3.427}\ \text{INDEP}$$

$$+\underset{(0.068)}{0.176}\ \text{TRAKMAIN} + \underset{(0.003)}{0.006}\ \text{TOTTNSRV} + \underset{(1.216)}{4.457}\ \text{NUMCONNS}$$

The inclusion of two dummy variables, SOUTHERN and INDEP, indicates that both location and ownership type are important variables for prediction of traffic expenses. The relationship suggests that $4,469 would be added to the constant term of -$5,554 if the line is in the ICC's Southern District, while $3,427 would be added if the carrier is independently-owned. This information indicates that carriers having such characteristics are likely to spend greater sums for activities such as

advertising, soliciting and securing traffic, and preparing and distributing tariffs governing such traffic. It is understandable that carriers which are independently-owned would find it necessary to place greater emphasis on such expenditures than carriers owned, for example, by an on-line shipper.

Two measures of the scope of operations, TRAKMAIN and TOTTNSRV (see Table 6) also have significant explanatory ability. Although their coefficients are respectively smaller in magnitude than those which are included in other cost-estimating equations, average traffic expenditures are also smaller.

Lines which have greater numbers of connecting carriers also tend to spend more for this expense category. The average figure of $4,457 per connection tends to support the notion that those lines having a variety of connecting carriers, and hence a greater range of services to offer, incur greater costs to secure traffic volumes.

Total Transportation--Rail Line. This type of expense is extremely important. The analysis indicated that for the 86 carriers studied, transportation expense averaged approximately 35 percent of total operating expenses. The explanatory relationship developed was:

$$\text{TOTTRANS} = 7.108 - \underset{(9.546)}{15.590}\ \text{SOUTHERN} + \underset{(0.022)}{0.150}\ \text{TOTTNSRV} + \underset{(0.313)}{3.367}\ \text{LOCMILES}$$

The presence of the dummy variable SOUTHERN was due in large part to the fact that prevailing wages for train and engine employees were substantially lower for Southern district roads than for those located in other parts of the country. In 1974, average hourly wages for Class II operating personnel were $3.54, $4.21, and $4.82 for carriers studied in the Southern, Eastern, and Western districts, respectively. Also important to consider is that labor costs represent approximately 50 percent of transportation expenditures, and the variable SOUTHERN actually represents a surrogate for such costs. If data had been available for the study carriers regarding the degree of labor organization, perhaps even greater insight would have been provided.

Also contributing to explanation were total tons of revenue freight carried and locomotive unit-miles, each significant at the .01 level. Transportation expenses are estimated to increase by $150 for each thousand tons of freight carried, and by $3,367 per thousand locomotive unit-miles. The inclusion of these variables provides strong evidence that measures of the scope of operations are extremely important when attempting to explain expenditures for the provision of transportation service.

The relationship derived was quite acceptable. The computed R-square of 0.845 and an accompanying high level of significance as measured by the

F-ratio indicate that the equation was responsible for a great deal of explanation of variation in transportation expenses.

Total General Expenses. Because such expenses are largely composed of those related to administration, the following equation was able to explain over 90 percent of variation in the dependent variable relating to general expenses:

$$\text{TOTGEN} = 5.806 + \underset{(0.005)}{0.012}\ \text{TOTTNSRV} + \underset{(0.044)}{1.076}\ \text{ADMIN}$$

The estimation procedure requires that \$12 per thousand tons of freight and \$1,076 for each thousand dollars of administration expense be added to the constant term of \$5,806. Once again, TOTTNSRV provides an indication of the scope of operations, implying that more intensive operations incur greater levels of general expenses.

Grand Total of Railway Operating Expenses. Although estimates derived from the preceding five equations could be added together to construct an estimate of the grand total, it was felt that separate treatment of the total would provide information of additional interest. The use of multiple regression analysis resulted in the following equation:

$$\text{GRANDTOT} = 15.318 + \underset{(1.028)}{4.830}\ \text{TRAKMAIN}$$

$$+ \underset{(0.051)}{0.588}\ \text{TOTTNSRV} + \underset{(0.144)}{0.234}\ \text{XTIESREP}$$

Incorporated are variables related to main track mileage, total tons of revenue freight carried, and number of ties replaced per mile per year. Each of these has been discussed previously with respect to estimation equations for individual types of costs.

The ability of this equation to explain the grand total of railway operating expenses was quite satisfactory, as measured by the R-square of 0.694 and an associated high level of significance. Additional variables could have been included, but the possibility of introducing extreme multicollinearity kept those included to a minimum.

Summary

The preceding describes the development of six equations which are appropriate to the task of estimating both individual types of railway operating expenses for Class II carriers and their total. Each relationship shown was seen to be statistically significant and properly specified with regard to particular variables included. As previously suggested, the actual use of the estimating procedures must be accompanied by a keen sense for special characteristics of individual lines which may imply that costs of an extraordinary nature are likely to be incurred. If such a conscientious effort is pursued, the equations developed are likely to provide significant insight into the expected magnitudes of the costs of operating a light density line independent of Class I ownership.

IV. HANDBOOK FOR PRESERVATION OF LOCAL RAILROAD SERVICE

Objectives and Overview

As previously mentioned, the major objective of this project was to prepare a handbook to aid local private/public groups in evaluating the future potential of a threatened light density rail line service and, depending upon that analysis, to describe exact procedures involved when putting into effect selected courses of action. A feature of the Handbook was to relate the experiences of and lessons learned by those carriers interviewed as to what is required to operate successfully a light density rail line. In addition, a variety of cost estimation procedures were included in order to help in the selection of a course of action.

As indicated in the work plan which appeared in Insert A, there were many types of data which were relevant to the goals of this research effort. Sources of pertinent information included those contained in three general groups: (1) the 1974 Class II carrier data obtained from the ICC; (2) results of interviews conducted with carriers and other interested parties; and (3) the wealth of published literature, including state and federal government reports. While the first two sources were considered at length in the two preceding sections of this report, the bibliography included in Appendix 1 has been provided to document pertinent literature which was surveyed. That list of sources is by no means intended to be exhaustive, but is included to note those sources which were most valuable in preparing the Handbook.

The purpose of this section is to discuss the content and organization of the Handbook which was developed. For reference purposes, a copy of the Table of Contents of the Handbook has been provided in Insert C. There were four major sections of discussion provided: I. Introduction to and Orientation of the Handbook; II. Alternatives for Preserving Existing Class I Light Density Rail Line Service; III. The Independent Railroad Alternative; and IV. Evaluation and Implementation. The content of each of these will be summarized. In addition, ten appendices were included at the end of the Handbook. It is not the intent of this section to provide detailed information included in the Handbook; rather, emphasis will be placed upon describing the major points which were developed in each of the four major sections of the Handbook.

Introduction to and Orientation of the Handbook

The Handbook is designed to assist those individuals or groups who seriously want to preserve a local railroad freight service that is threatened with, or already has been abandoned by, a rail carrier. It is quite likely that these individuals or groups feel that continued rail service is absolutely essential to the present and/or future economic well-being of their area. In addition, they stand ready to support actively, perhaps even

INSERT C

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participate in, the effort to preserve rail service. This participation could involve appearances before federal and state regulatory and promotional agencies; meetings with influential representatives of state and local governments; bargaining with large rail systems; physically working on a right-of-way or operating a rail line; and perhaps attempting to raise money to support the rail preservation efforts.

The Handbook realistically and candidly describes what is involved with rail preservation and provides leads as to possible directions which may be taken in attempting to preserve a service. This includes advice regarding what to do and what not to do when engaged in these efforts. If there is a particular bias or emphasis on the part of the authors, it is toward the "what not to do," for unfortunately what may work in one situation may not succeed in another. Specifically, problems and obstacles to rail preservation are underscored, and discussions are included with regard to the minimum prerequisites for success.

There are a few subjects related to railroad abandonment which are not discussed at great length in the Handbook. Included are: (1) participation in abandonment proceedings; (2) evaluating the possibility of a modal shift; (3) evaluation of the economic impact of rail abandonment; and (4) the preparation of applications for federal light density rail line subsidies. Each of these, however, are mentioned and described therein. In addition, several useful sources of information are recommended for reading by those interested in such topics.

The introduction to the Handbook also includes a statement by the authors regarding "sincerity." Referred to as the "essential ingredient," the authors strongly suggest that all potential users be sincere in their efforts to preserve rail service. They are cautioned that such an effort more than likely will involve long hours of mental, perhaps physical, labor and, most assuredly, money. Because running a railroad is an expensive, time-consuming operation, local boosters must try to evaluate the *benefits* to be derived from continuing rail service versus the *cost* of keeping it. They are warned that there may be a variety of factors which motivate local groups to participate in rail service continuation efforts, but that the most important factor should be that of a business decision based upon realistic economic facts.

This part of the Handbook concludes with a brief presentation of the content and organization of the remaining sections. This serves the purpose of providing the reader with a formalized statement of what is to follow. In addition, the information sources and procedures which were used in compiling the Handbook are discussed. Such a discussion is included to allow an understanding of the total research effort which was undertaken in order to produce the document.

Alternatives for Preserving Existing Light Density Rail Line Service

This part explores the procedures that have been developed and suggested by those interested in the continuation of light density rail line service by the carrier presently providing the service (as opposed to take-over by an independent company). These interested parties include on-line shippers and local booster groups which are referred to as the private interests or sector, and various governmental agencies on the local, state and federal levels, which are referred to as the public interests or sector. Although the independent railroad alternative is discussed extensively in the following section, the authors recommend as a rule-of-thumb that locally initiated aid programs to preserve an existing trunk line service are preferable to the starting up of a new, independent operation to serve the light density line in question. The major reasons for this advice are the potential expenditures likely to be involved with independent operation, and the problem of securing necessary expertise to manage it.

Efforts to retain existing services primarily have centered on increasing revenues and/or decreasing costs. These programs have been carried out by: (1) local shippers; (2) local shippers in conjunction with a governmental agency, either local, state or federal; or (3) a governmental agency acting independently. In this part of the Handbook programs to increase revenues are discussed first, followed by suggestions to decrease the cost of light density rail operations. In each case, efforts of the private sector are covered at the beginning; then potential public sector actions are evaluated. Finally, a program involving costly rail line rehabilitation carried out in Iowa by private groups and apparently copied in part by the state, is described and analyzed. In that example, short-term expenditures of substantial magnitude were necessary in order to assure both short- and long-term revenue gains.

Private Programs to Raise Revenues

Most private efforts to increase revenues generated by a light density line involve a higher cost operation for on-line shippers, at least in the short-term period. For example, the most basic solution is for shippers using a line to increase their use of it, probably at the expense of using another means of transport, in all likelihood, truck transportation. As a rule, rail rates are lower than truck rates, yet motor transport is frequently faster than rail and is more dependable. Because of a growing disenchantment by the railroads with shipper promises of more carloads and concurrent deficit operations for many large rail carriers, the authors of the Handbook recommend consideration of schemes whereby present shippers pay more for the use of rail service, at least in the short run, to encourage its permanency.

Shipper payments of higher rates are discussed in the context of rate increases, the attachment of arbitraries and the payments of surcharges per carload. Included is a presentation of an agreement reached by a

Class I carrier and a group of shippers where, in effect, the shippers indemnified the carrier against losses on a particular line by guaranteeing a $65 surcharge for each carload of freight moved over the line until volume reached such levels that the extra payment could be dropped. Under the agreement, the line was to be rehabilitated over a period of years, and service standards were not to be altered significantly, although an improved right-of-way was specified in the agreement which reduced derailments and improved the dependability factor. Also discussed is the yearly prepaid supplement plan, which is basically a variation of the indemnification against loss idea. The plan requires an advance payment by a group of railroad users to the railroad providing them with service. This supplement is calculated to cover the expected deficit for continued operation for a certain future period, usually one year. It reduces the risk to the carrier of further operating losses due to continued operation and concurrently encourages the shippers to increase their freight movements by railroad.

It is stressed repeatedly that carrier revenues will be increased by greater shipper utilization of light density rail line service. This includes both enlarging the scope of present on-line industrial operations and attracting new plants to locate on the light density rail line in question.

Federal and State Subsidy Programs

This section is intended to provide the reader with information concerning aid to local light density railroad service which is specified by provisions of the Railroad Revitalization and Regulatory Reform Act of 1976. Local groups interested in obtaining such aid are encouraged to work through and with their local and state transportation officials in the development of the state rail plans which are the basis for the selection of light density rail lines to receive federal assistance. The authors conclude that direct federal assistance to unprofitable rail lines should be primarily an interim device to lessen the burden of economic dislocation before ultimate line abandonment. If it can aid in redevelopment of a facility to a profit-making basis, then the aid is also justified. It is anticipated, however, that the former purpose is the most realistic one. In the long-term, a light density line must become self-supporting through the efforts of the private sector without a reliance on public subsidy.

Potential Cost Saving Programs by the Private Sector

Considered at this point in the Handbook are a variety of programs which may be appealing to on-line shippers and/or local groups interested in accomplishing a reduction in costs for the carrier currently providing the necessary service. As was the case regarding the raising of revenues, reductions in costs incurred by the serving carrier will frequently require the transfer of some of them to the rail users or other interested local parties.

Possible cost reduction alternatives available to the railroad include decreases in expenditures for maintenance of way, reductions of service levels (for example, for two days per week service rather than daily), and decreases in the number of crew members operating trains. The problem for local groups on many money losing lines is that these opportunities already have been utilized by the trunk line carrier. The authors state that the possibilities for cost reduction by the operating carrier typically are unrealistic to nonexistent. Promoting track deterioration, reducing service standards, and/or expecting union cooperation in reducing manning requirements are not the proper methods or policies prerequisite to operating a rail line on a sound, long-run basis. It is recommended, however, that on-line interests consider other possibilities which include the assumption of responsibility for some or all of maintenance of way costs, the local purchase of a line and subsequent leasing of it to the trunk line, or the payment to the large carrier of an operating fee to provide a certain level of service.

Potential Cost Saving Programs by the Public Sector

The public sector is where many feel the direction, leadership, and financial backing must come from for any long-term solution to the light density branch line problem. In addition to a discussion of the magnitudes and potential possibilities for relief in the area of taxes, additional detail is provided regarding the option of purchase and lease-back. Some states have embarked on programs of purchasing rights-of-way, then leasing them to private companies to operate and/or maintain. Details are provided concerning the participation of the state of Vermont with regard to the continuance of railroad service. That state purchased over 180 miles of rail line and leased two portions of the track to private, fully-regulated rail companies for 40 years. The railroads pay the equivalent of a rental fee each year, are taxed on a sliding percentage scale proportionate to gross operating revenues generated, and are responsible for quality and cost of maintenance of way and structures. Finally in this section, the readers are acquainted with various assistance programs which are available through a variety of governmental agencies. Such possibilities include arrangements to preserve a rail line through the issuance of debt, use of general tax revenues and special assessments, the creation of regional authorities, and other means.

Private and Joint Public/Private Efforts to Rehabilitate Track

This section cites the content of two similar programs, one initiated by shippers only, the other by the state in conjunction with the private sector, which have resulted in the rebuilding of close to 100 miles of relatively light density line track in Iowa.

The private effort began in the early 1970s when farmers whose grain elevators were located on certain branch lines found they could not sell their products as lucratively in the marketplace as farmers using elevators on main lines. An agreement was reached between a group of shippers and the serving trunk line by which the carrier would rehabilitate the line virtually

to main line standards. Incorporated was a scheme in which the farmers raised the money to rebuild the right-of-way, and subsequently loaned it to the railroad free of interest. In return, the railroad credited the users for every carload of freight originated or terminated on the line. The loan was repaid so that at the end of each year, the users received a check for the total of the year's accumulated credits. Thus, through the initiative of shippers who knew the value of reliable railroad service, both shippers and railroad benefited. The railroad rebuilt its property and sustained substantial gains in revenue traffic. The shippers, meanwhile, became competitive in the marketplace for grain without having to move their facility to a main line at great expense.

In response to what appeared to loom as a transport crisis for the state's rural economy in 1974, Iowa passed a rail-assistance program that is being scrutinized closely by several midwestern states and a large group of government agencies as perhaps a most productive method of rehabilitating deteriorated rail lines that still are needed in the interest of the public. Under the program, all light density lines in the state, whether branch or main line, are evaluated according to their need by on-line shippers, usually farm cooperatives. The lines are analyzed according to past and future potential traffic volumes, condition of the track and past derailment record, and the potential for contributions by shippers and railroads to rebuild the track.

The shipper/railroad participation cost is the unique part of the Iowa program. The lines with the best potential qualify highest for the funds made available by the state. The amount allocated then is matched by on-line shippers and the trunk carrier owning the line to produce the total needed to rebuild the track. Conceptually, each party contributes one-third of the cost, but actual agreements may vary according to the financial ability of the parties, especially the railroads. In one case the railroad contributed nothing because it was bankrupt. The program resembles the private sector project described earlier in the Handbook in that the funds made available to the railroad are treated as a loan. The railroad does the rehabilitation work, but under this program also puts up part of the funds. The money loaned to the carrier is paid back through the issuance of refunds, depending upon whether the loan originated with the shipper or the state. On shipper loans, a repayment or refund is made on every carload moved over the line *during and after* completion of rebuilding work. The state loan, on the other hand, is repaid by refunds *only after* completion of the rebuilding work *and only* on *new* traffic handled over the rehabilitated line; that is, volume *above* that moved previous to rebuilding.

Summary

A review of the material in this part of the Handbook should enable readers to think of additional methods to preserve service through modifications of current practices. This can be expected in what is a relatively new area of interest, for the campaign to save rail service in many parts of the country has developed only in the last decade. Consequently, the preservation

attempts selected as topics for discussion are limited in number, and the long-term pros and cons associated with each one have not been determined conclusively. New ideas for keeping the tracks in place on a profitable basis are also of interest to state and federal departments of transportation, planners, public service commissioners, the Interstate Commerce Commission, shippers, local booster groups and the trunk lines themselves.

The Independent Railroad Alternative

This major part of the Handbook is designed to orient local interests in detail as to what is involved in establishing and operating a relatively small (by trunk line standards) railroad. If continuation of necessary railroad service by the current trunk line carrier is not feasible, local interests may want to investigate the possibility of taking over the rail line in question and initiating a separate, independent operation to provide the desired service. Although the number of pages devoted in the Handbook to the independent railroad alternative is substantially greater than that accorded alternatives for preserving existing light density rail line service, this is by no means to be interpreted as a measure of the relative importance of each. In fact, the authors feel that for most lines under most circumstances, the alternatives discussed in the preceding section represent the types which should be considered most seriously. Projects involving independent operation of a railroad may entail greater financial sacrifices than those aimed at simply preserving the existing form of service. Therefore, a realistic appraisal of available funding, along with prospective profit or loss estimates, is an absolute necessity before committing large sums of money to independent operation. Although some recently created independent lines continue to exist, operations are not always profitable, and the capital invested would earn a better return in other financial opportunities. Readers are cautioned to be aware that a number of independents have suspended operations or gone out of business altogether.

As an introduction to this part of the Handbook, users are encouraged to assess accurately the success potential of an independent railroad operation. The discussions which ensue contain a variety of ideas which are of general nature, and which should be considered carefully before pursuing this alternative further. Included are the causes for optimism, the expertise problem, the rehabilitation problem, the financial base requirements, and the realistic appraisal requirement. Following the conclusion of such general discussions, the remainder of this part of the Handbook is devoted to two major factors of interest: those related to determining the revenue potential of local rail lines; and the cost of alternative forms of light density rail line service. Each of these will be discussed briefly.

Determining the Revenue Potential of Local Rail Lines

The goal of this section is to indicate in some detail the methods by which local rail lines can generate gross revenues. Even the most efficiently operated, low-cost railroad will lose money unless it takes in a certain quantity of money. Readers are warned against relying upon: (1) one basic

commodity and/or (2) seasonal items such as agricultural products to support a line. Unfortunately, many small carriers are dependent upon one product that is shipped only at certain times of the year, and consequently are vulnerable if the market for the product declines, or worse, if shippers find a better way to move the commodity. In addition, it is strongly suggested that limited faith be placed on promises and optimistic traffic projections made by shippers and local booster types, respectively, and promises and projections conditioned upon the railroad improving its service standards. The validity of such expectations should be challenged carefully before being regarded as an accurate input to the ensuing decision process regarding the operation of an independent railroad.

A detailed discussion is provided regarding the various types of revenues which are available to such operations. In addition to operating and nonoperating revenues, other possibilities include those which may be generated by providing a variety of services for trunk line carriers, the receipt of per diem payments, and demurrage charges. Because of the various ways in which operating revenues are determined, a fairly detailed attempt is made at distinguishing between divisions and switch payments. In addition to the advantages and disadvantages of each, general information is provided regarding the determination and use of railroad freight rates, factors which affect such rates, and definitions appropriate to high and low value freight.

The degree of regulation is a factor which should be considered carefully before determining the legal form of operation to be implemented. Possibilities include: (1) a Class II railroad; (2) a switching/terminal carrier; and (3) the industrial or private railroad. The most extensively regulated local railroad is designated a Class II or short line railroad. Such operations are regulated by the Interstate Commerce Commission and by appropriate state agencies as full service common carrier railroads. They are expected to provide a range of services not unlike those provided by larger carriers, and are highly regulated regarding rates, services, and safety. The switching/terminal carrier is also a distinct entity--usually a corporation but possibly a proprietorship or partnership--created as a subsidiary of a company or as an independent firm. Typically, it does not provide the full range of services offered by Class II line-haul carriers, but merely provides the service whereby cars are switched from an interchange point with a larger carrier to the particular industry for which they are consigned. This type of carrier is also subject to economic and safety regulation. Industrial or private railroads are railroads operated by a company strictly for its own use. As such, they are not regulated as common carriers, and in all likelihood would not be organized as a separate legal entity but rather as a department, office, branch, or some other part of a parent firm.

A necessary component of the investigation of the independent railroad alternative is to determine the revenue potential for a new local rail line. Such an effort will require two types of knowledge: (1) the number of carloads that will be handled annually on the line and (2) the revenue received per carload. It is suggested that the first requirement should be satisfied by local interests on their own, but the second can be determined only after

the new line owners have negotiated and settled with the connecting railroad regarding revenue divisions and/or switching charges. The short line/trunk line negotiation process is discussed in detail and includes an evaluation of such topics as: the bleeder versus feeder concept, potentially favorable bargaining positions, multiple connections and influential accounts, switching arrangements at interchange points and reclaim per diem. In addition, a variety of ideas are presented regarding the type of relationship which should be established between the independent railroad operator and the connecting Class I carrier. The payment between the lines is particularly important. Two types of settlement are possible: a "junction settlement" and an "interline settlement." A very detailed evaluation of each is provided, along with the general recommendation that the independent railroad alternative will in all likelihood find the junction settlement best for meeting their interests. Also discussed regarding new line rate policies are the respective values of using arbitraries and/or local rates.

Cost of Alternative Forms of Light Density Rail Line Service

This section is designed to acquaint the reader with the types of costs which are likely to be incurred when operating a light density line independent of Class I ownership. In addition, the factors which affect such costs are discussed at length and procedures for estimation are presented.

It is suggested that plans to operate a light density line consider four types of cost:

- Acquisition;
- Rehabilitation;
- Operating; and
- Nonoperating.

The costs of acquiring railroad properties and rehabilitating deteriorated trackage to meet some minimum standard should be considered as "set-up" costs which must be incurred when a decision has been made to implement a particular strategy. They represent an initial cost, as such constitute an investment, and may be amortized over a period of years depending upon the methods of financing available. The sum total of operating and nonoperating expenses include those which are incurred on a year-to-year basis, and may include allowances for depreciation and interest on debt.

Acquisition. The various types of rail properties which should be considered for acquisition purposes include road properties, equipment, materials, and general and administrative assets. Discussions are included pertaining to the importance of valuation of property and potential sources of funds. Although the Handbook contains advice regarding the potential magnitudes of acquisition costs, it is conceded that there are no generally acceptable guidelines for estimating the total magnitude of such expenditures.

The recommendation is that each line determine its needs for the various types of property, and hence estimate costs accordingly.

Rehabilitation. Once acquired, there in all likelihood will be a real need to rehabilitate the property (particularly right-of-way and track structure) to some predetermined standard. The presentation makes explicit reference to Federal Railroad Administration track standards when attempting to determine rehabilitation needs and costs. A concise procedure is recommended for accomplishing needed rehabilitation. Although actual dollar costs are highly dependent upon current track conditions and are, therefore, quite unpredictable without a complete knowledge of a line's particulars, an analysis developed by the United States Railway Association is presented in the section for the user's guidance. The reader is warned that realistic rehabilitation cost estimates are an absolute necessity when determining the future financial viability of a new short line railroad.

Operating Expenses. The Handbook contains detailed descriptions of the various types of operating expenses:

- Maintenance of way and structures;
- Maintenance of equipment;
- Traffic;
- Transportation-rail line; and
- General

Each of these are subjected to a rigorous scrutiny regarding their nature and the factors which are of importance when attempting to estimate their magnitudes. In addition, two basic approaches to cost estimation are included. The first incorporates many of the ideas suggested by short line railroad managers during the interviewing process. The authors' view of the limitations associated with each particular opinion are included. The second approach includes the development of cost-estimating procedures based upon the results of the multiple regression analyses discussed in the preceding section of this report. Such methodologies for cost estimation are included in the Handbook in tabular form and do not require the reader to compute cost estimates from individual regression equations. Although such equations could have been included, it was felt that the readers would prefer an easy-to-use guide to such estimation rather than be exposed to details of the statistical methodology employed. Cost estimates shown were derived directly from the estimation equations described in the previous section. The Handbook tables will allow the reader to produce quickly the various cost estimates, and will allow the statistically interested reader of this report to verify translation of the regression results into the tabular format in the Handbook.

Nonoperating Costs. Three types of costs were considered in this category: tax accruals, net rents payable (per diem), and fixed charges. Although a description of factors important to the estimation of such costs is included,

such costs in fact will vary from line to line and do not readily lend themselves to accurate estimation without various specific details. Their inclusion in the Handbook should, however, allow the reader to assess their importance and to understand the necessity for their inclusion in a thorough investigation of costs of independent operation of light density rail lines.

Evaluation and Implementation

This section serves as a conclusion for the Handbook in which major ideas are reviewed and requisites for efficient implementation of alternatives are discussed. The need for a benefit-cost analysis when considering rail preservation is stressed and several ideas are included to assist the reader in making such an analysis.

Appendices

References were made throughout the Handbook to a total of ten appendices which were included following the text. Although some are lengthy, it was felt by the researchers that each represents information which should be considered carefully by local interests concerned with the preservation of existing railroad service or the provision of an independent form of operation.

V. SUMMARY AND CONCLUSIONS

Review of Objectives and Results

The objective of this report was to provide technical documentation of the research methodology which was developed and employed in order to produce a manual entitled Handbook for Preservation of Local Railroad Service. The information contained therein is designed to assist those individuals or groups who *seriously* want to preserve a local railroad freight service that is threatened with, or already has been abandoned by, a rail carrier. The Handbook realistically and candidly describes what is involved with rail preservation and provides leads as to possible directions which may be taken when attempting to preserve such a service.

Approaches which should be considered are generally grouped into two categories: those which are designed to assure the continuation of currently existing service, and those which will result in a newly formed independent railroad operation. With regard to the former, a variety of possibilities are included for discussion purposes:

- Private programs to raise revenues
- Federal and state subsidy programs
- Potential cost saving programs by the private sector
- Potential cost saving programs by the public sector
- Private and joint public/private efforts to rehabilitate track

Coverage of each of the above topical areas incorporates a definition of the types of alternatives under consideration along with presentation of selected "case study" material which is appropriate. In addition, an objective evaluation of the advantages and disadvantages of each approach is provided. Hopefully, such material will provide insight for shippers, local and state governmental units, and planners in their efforts to retain a rail service in its present form.

Ideas presented with respect to the independent railroad alternative represent the other main portion of information necessary to include in the Handbook. Although such an approach may be a viable one for some light density line situations, its implementation in all likelihood requires a far greater commitment (notably financial) on the part of local interests than would be necessary to investigate opportunities for retention of existing service. For those contemplating formation of a "local" railroad, the Handbook provides an in-depth discussion of methods available for and factors important to determination of the success potential of such an undertaking. Considerable attention is devoted to the revenue potential of and the costs likely to be associated with such lines.

On the revenue side, areas of critical interest discussed are: the importance of revenues, determination and use of railroad freight rates,

regulation, legal forms of operation (i.e., Class II line-haul versus switching/terminal, and the industrial or private railroad), estimation of operating revenues and the importance of the relationship with connecting carriers. Discussion pertaining to costs are divided into four classifications: acquisition, rehabilitation, operating and nonoperating. The treatment of each cost item involves two steps. First, a comprehensive qualitative analysis of the factors affecting the magnitude of each one is presented. Second, and a unique feature of the Handbook, is a series of cost-estimating equations which are presented using easy-to-read tables that enable the user to predict annual expenditures for each major category. These equations were the result of a thorough investigation of 1974 Class II carrier annual report data submitted to the ICC. The technique of multiple regression analysis was used to produce the results which were logically constructed and valid in a statistical sense.

The Handbook concludes with a discussion of the importance of a relevant benefit-cost analysis to be conducted by local interests who are concerned with the preservation of railroad service. In addition, a variety of ideas are presented which are important to the efficient implementation of the available alternatives. Following the text, a series of appendices are included which provide the reader convenient access to a variety of important supplementary information.

Development of the Handbook was preceded by execution of a carefully designed research methodology, the main thrust of which was to gather information and data from a variety of sources. Of major importance were:

- Personal interviews with Class II carrier personnel

- Discussion with Class I carrier officials, representatives of various governmental agencies, consultants, and a number of other interested parties

- Annual report data as submitted for the year ending December 31, 1974 for the population of Class II railroads which were neither owned nor operated by a Class I carrier

- A review of the published literature pertaining to the abandonment problem in general, and specifically to available alternatives

In total, personal interviews were held with 115 interested individuals. Included were representatives of nine Class I carriers and 60 Class II carriers. In addition, contact with officials of the Class II lines usually was accompanied by an on-site inspection of the respective rail properties. The major reason for the extensive interview program was to provide the research team with a realistic understanding of the various alternatives under consideration. In this manner, it was hoped that the Handbook would be able to incorporate a variety of "real-world" ideas, and thus refrain from a purely textbook-type approach. The authors feel that this objective was accomplished.

An academic approach, however, was necessary with respect to the topic of independent railroad cost-estimation. Selected annual report data were received from the ICC for 148 Class II rail carriers and was subjected to a thorough analytical investigation using multiple regression analysis. Finally, the

available literature provided a wide variety of information which was of direct or indirect importance to the objectives of the Handbook.

Major Implications of the Research

After studying the railroad abandonment problem for almost two years, the authors of the Handbook and this report are convinced that a significant amount of light density track presently operated by Class I railroads in this country should be abandoned. This includes mileage already involved in abandonment proceedings or to be put up for service termination in the coming years. If this country is to have an efficient, financially strong, privately owned railroad industry, that industry must no longer be required to provide money-losing services.

However, the researchers also can sympathize with those individuals or groups who feel sincerely that loss of rail service will jeopardize in some way, either directly or indirectly, their future economic well-being. It is acknowledged that, in certain situations at least, continuation of current marginal or money-losing lines can be justified, at least on a temporary basis. Examples of such cases include those where the Class I carrier has not operated or merchandised the property so as to realize its full potential, or the line's total losses are less than the financial hardship on local interests that will be brought about by abandonment.

It is situations like these for which the Handbook is designed. Its purpose, first, is to help evaluate the potential of a line and impress upon the user the need to be sincere in rail preservation activity. Next, it covers methods by which an existing service can be retained through a local subsidy or aid of some type, so that it will no longer be a financial burden on the Class I line. If it is determined that the local subsidy concept is impractical, the Handbook leads the user through a thorough introduction to the establishment and operation of an independent short line railroad.

Throughout the entire Handbook, the reader is reminded of the potential costlines of rail preservation activities, and that the resources spent on retaining a railroad service might be employed more productively in finding new methods of moving the affected local freight. At the beginning of the Handbook, the authors emphasize that it is not their intent to provide legal assistance for local interests that merely want to force continued operation of a money-losing service by the Class I carrier.

Assuming that the Handbook is distributed to affected areas and in sufficient number such that all those considering rail line preservation activities become aware of its existence, the authors feel that chances will be improved for an increased facilitation of abandonment of marginal or money-losing track by trunk lines as local groups assume responsibility for the losses either by local subsidy programs or independent takeover of the property. This in turn will help to achieve two desirable objectives that have been stated previously: (1) a stronger trunk line industry that will concentrate on providing service where the strongest demand exists for it, and (2) the continuation of light density rail service where it genuinely is needed in the interest of the economic well-being of those served, and at the expense of those served.

Publication and Distribution of the Handbook

As contractually agreed, the Department of Transportation (DOT) is responsible for publication of the Handbook for Preservation of Local Railroad Service. This task will be accomplished giving due consideration to the need to publish the document in a visually appealing, easy-to-read format.

Secondly, for the Handbook to be effective, it must be accessible to those who can use it. It is recommended that a single page release in a newsletter format that briefly describes the Handbook and its availability be distributed widely. This circulation would include existing DOT mailing lists, which presumably include libraries, major government agencies, and educational institutions. In addition, the Department should consider notifying all trade journals which have a readership that uses directly or is affected by railroad freight transportation.

The publication's appearance and availability obviously will have a profound influence on the extent to which it is utilized by its intended readership and, consequently, the degree to which it accomplishes the objectives set for it as described previously.

Additional Means for Dissemination of Research Results

In addition to the publication and distribution of the Handbook by the Department of Transportation, the authors recognize the need to disseminate generally the results of the research which was accomplished. This reflects (1) the desire of the DOT for widespread distribution of transportation research (conclusions, particularly) to those persons who can directly benefit by or apply such outputs, (2) encouragement by the Program of University Research for publication of research results in professional journals, books, trade publications, and other appropriate media, and (3) the interests on the part of the researchers themselves. The authors do not intend to publish project results in a thesis or collection of these, for such outlets are not typically characterized by widespread distribution. Any publication will contain acknowledgements of the Department of Transportation's sponsorship of the research effort, and a disclaimer stating that the report represents the position of the authors and not necessarily that of the Department.

Three articles communicating the results have been published to date. Although the appropriate citations have been incorporated into the bibliography (see Appendix 1), they are included here for convenient reference:

Davis, Frank W. Jr., Patton, Edwin P., and Tuttle, Robert E. Jr., "Local Participation: The Key to Preserving Adequate Railroad Service," MSU Business Topics, Vol. 24, No. 1 (Winter 1976), pp. 40-46.

Langley, C. John Jr., and Patton, Edwin P., "Alternatives to Abandonment," Distribution Worldwide, Vol. 75, No. 4 (April 1976), pp. 35-37.

Patton, Edwin P., Langley, C. John Jr., and Tuttle, Robert E., "Alternative Strategies to Railroad Abandonment," (Working Paper TC 76-013), Knoxville, Tennessee: The University of Tennessee Transportation Center, 1976.

In addition, it is anticipated that other manuscripts will be prepared for submission to appropriate professional and trade publications. A variety of presentations to professional groups also are planned.

APPENDIX 1

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APPENDIX 2

CARRIERS AND INTERESTED PARTIES INTERVIEWED

A. Short Line Railroads

Alexander Railroad*
S.J. Zachary, Secretary Treasurer, General Manager and Superintendent

Algers, Winslow and Western Railway Company*
Robert A. Shaw, General Manager

Ashley, Drew & Northern Railway Company*
E. Austin Temple, President and Treasurer
P.H. Schueth, General Manager

Atlanta and Saint Andrews Bay Railway Company*
R.A. Givens, Chairman of the Board
W.K. Edwards, Director of Labor Relations
J.W. Cunningham, Vice President, Operations

Bath & Hammondsport Railroad Company*
Anthony Hannold, Vice President

Bellefonte Central Railroad Company*
H.R. Ammerman, Executive Vice President and General Manager

Cadiz Railroad*
H.S. White, Jr., President

Cape Fear Railways Inc.*
J.C. Odom, Vice President and General Manager
J.C. Ostrom, President

Claremont and Concord Railroad
S.M. Pinsley, President

Central Iowa Transportation Cooperative*
Harlan A. Stubbs, President

Central New York Railroad
Walter Rich, President

Chattahoochee Valley Railway*
G.W. Neal, President

Chicago, West Pullman & Southern Railroad Company*
J.E. Rice, President and General Manager

Clarendon & Pittsford Railroad
Harold Filskov, Vice President

Columbus and Greenville Railway*
Sam Y. Wilhite, Chairman of the Board
Craig E. Burroughs, President

Cooperstown & Charlotte Valley Railroad*
Arthur Ouslander, Adminstrative Assistant

Corinth and Counce Railroad Company*
C. W. Byrd, President
J. H. Burton, Secretary-Treasurer

Dansville & Mount Morris Railroad*
R. F. Hart, President

DeQueen and Eastern Railroad Company
T. R. Sims, Auditor and Assistant General Manager

Durham and Southern Railway Company
Robert Zendell, Executive Assistant to former General Manager

East Camden & Highland Railroad Company*
Don E. Ghent, Vice President and General Manager

El Dorado and Wesson Railway*
H. D. Reynolds, Jr., President

Frankfort and Cincinnati Railroad Company*
S. M. Pinsley, President
Bruce A. Raine, General Manager

Fonda, Johnstown & Gloversville Railroad
Walter Rich, President

Genesee & Wyoming Railroad*
John Keefer, Vice-President

Graham County Railroad Company*
Dan Ranger, President & General Manager

Graysonia, Nashville and Ashdon Railroad Company*
Al F. Backus, General Manager

Great Plains Railway Company*
T. M. Minard, President and General Manager

Green Mountain Railroad*
Robert Adams, President

Greenville and Northern Railway*
S. M. Pinsley, President
D. V. Harrell, General Manager

Hartford and Slocomb Railroad Company*
C. F. Fisher, President

Hartwell Railway Company *
M. G. Pfaender, President and General Manager
B. R. Bowers, General Agent

Lancaster and Chester Railway Company*
J. B. Bethea, Jr., President
W. P. White, Vice President, Operations

Laurinburg and Southern Railroad Company*
W. S. Jones, Vice President and General Manager

Louisville, New Albany and Corydon Railroad Company*
Walter Saulman, General Manager

Louisville and Wadley Railway Company*
B. D. Gibson, President and General Manager

Meridian & Bigbee Railroad Company*
Marvin V. Dendy, Executive Vice President and General Manager
Hal L. Davison, General Freight Agent

Montpelier and Barre Railroad
S. M. Pinsley, President

Morristown and Erie Railroad*

Narragansett Pier Railroad Company, Inc.*

North Louisiana & Gulf Railroad Company*
Charles R. Pyles, Superintendent

Ocean City Western Railroad*
George Norcross, President

Ogdensburg Bridge & Port Authority*
M. James McGuinness, General Manager

Pickens Railroad Company*
O. Monroe, President
J. Gillespie, Local Freight Agent

Pittsburgh and Shawmut Railroad*
W. R. Weaver, President
John Real, Traffic Manager

Prescott and Northwestern Railroad Company*
Howard B. Graham, Resident Manager

Providence and Worcester Railroad*
Bob Ossene, Traffic Clerk
(also officials on the Worcester Chamber of Commerce)

Rahway Valley Company*

Saint Mary's Railroad Company*
R. W. Chapin, Vice President and Manager

Southern Indiana Railway, Inc.*
William S. Elder, President

Strasburg Railroad*
William M. Moedinger, President

Texas, Oklahoma & Eastern Railroad Company
T. R. Sims, Auditor and Assistant General Manager

Valley Railroad Company*
Jim Goodwin, Employee

The Vermont Railway*
Harold T. Filskov, Vice-President

Warren & Saline River Railroad
Howard B. Graham, General Manager

Warrington Railroad*
H. G. Oakley, Secretary Treasurer, Superintendent

Wellsville, Addison and Galeton Railroad Corp.
Murray M. Salzburg, President

West Virginia Northern Railroad Company*
J. D. Everly, President

Winchester and Western Railroad*
Betty Hughes, President

Winfield Railroad Company*
J. R. Thompson, Superintendent
Joe Sepich, Office Manager

*Includes on-site inspection

B. Class I Carriers

Burlington Northern, Inc.
William DeWitt, Trainmaster, Galesburg, IL.

Chicago & North Western Transportation Company
Dennis Mize, Car Control Officer, Chicago, IL
Maury Reed, Assistant Chief Engineer, Chicago, IL

Chicago, Milwaukee, St. Paul & Pacific Railroad
James T. Hayes, Special Assistant to the President, Chicago, IL.
Larry E. Long, Staff Assistant-Office of the President, Chicago, IL.

Florida East Coast Railway
W. C. Thornton, President

Illinois Central Gulf Railroad
Alan S. Boyd, President & Chief Executive Officer, Chicago, IL.
Harry J. Bruce, Senior Vice-President-Traffic, Chicago, IL.

Missouri Pacific Railroad Company
John B. Harper, ex-Road Foreman of Engines, Van Buren, AR.

Penn Central Transportation Company
Bernard M. Reagan, Director-Planning Coordination, Philadelphia, PA.
Stephen J. Cherry, Assistant Manager-Planning Coordination, Philadelphia, PA

St. Louis-San Francisco Railway Co.
Martin M. Pomphrey, Assistant Vice President-Public Relations & Advertising, St. Louis, MO.

Southern Railway Company
E. A. Evers, Assistant Vice President, Markets Management, Washington, DC
Robert P. Fetter, Director, Market Research, Washington, DC
Edward G. Kreyling, Jr., Vice President-Marketing, Washington, DC

C. Other Parties Interviewed: Agencies and Officials

American Short Line Association, Washington, DC
Howard Croft, President
Charles Johns, Vice President and General Counsel

Applied Economics, Inc., Washington, DC
Byron Andrews, Jr.

Cahners Publishing Co., Chicago, IL
Tom Shedd, Editor, Modern Railroads
Frank E. Shaffer, Associate Editor, Modern Railroads

Centreville-Massey (CM) Associates, Inc., Centreville, MD
Arthur Kudner, President

Council of State Governments, Lexington, KY
William R. Black, Railroad Project Director, Bloomington, IN
James Runke, Lexington, KY

Delmarva Advisory Council, Salisbury, MD
Paul Phillips

Ener-Tron, Inc., Des Moines, IA
Dan Sabin, President and General Manager

Farmers Co-op, Dallas Center, IA
Ray Chartier

First National Bank, Humboldt, IA
Joe W. Dodgen, Chairman

Indiana University, Bloomington, IN
George Smerk, Professor of Transportation

Iowa, State of:
Honorable Robert Ray, Governor

Iowa Department of Transportation, Des Moines, IA
Vernon Deweerdt, Rail Assistance Coordinator
Paul Heitmann, Assistant Director

Iowa Energy Policy Council
Oren Olson, Humboldt, IA

Iowa State University, Ames, IA
Phillip Baumel, Professor of Agriculture Economics

Laverty Elevator, Inc., Indianola, IA
Chuck Laverty, President

Maryland Department of State Planning, Lower Eastern Shore Region, Salisbury, MD
Linda Kleinwachter
William Livingston

Worcester Chamber of Commerce, Worcester, MA
Robert Newcomb

New York, State of:
Department of Transportation, Railroad Task Force
Stephen R. Burgess, Associate Regulatory Analyst
Edgar S. Rose, Senior Regulatory Analyst
Louis Rossi, Vice Chairman

Pennsylvania, State of:
Pennsylvania Office of State Planning and Development, Harrisburg, PA
Robert Dennis

Pennsylvania State University, State College, PA
John C. Spychalski, Professor of Transportation

Rail Services Associates, Syracuse, NY
Gene Blabey

United States Government, Washington, DC
Federal Railroad Administration
Bill Anderson, James Boone

Interstate Commerce Commission
Section of Finance
Philip Israel, Deputy Director

Bureau of Operations
Robert Phahler, Director

Interstate Commerce Commission
Rail Service Planning Office
Office of Public Counsel
A. Gray Staples
N. Finklestein

James Ullman, Attorney-at-Law
Meriden, CT

Wyer, Dick & Company, Newark, NJ
C. C. Shannon, President

APPENDIX 3

OPERATING CLASS II RAILROAD CARRIERS WHICH ARE NEITHER CONTROLLED NOR OPERATED BY CLASS I CARRIERS

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class*	Ownership*	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Aberdeen & Rockfish RR	NC	47.0	F	I	Yes	Yes	No	No	Yes	001
Alexander RR	NC	19.0	D	I	Yes	Yes	Yes	Yes	Yes	002
Algers, Winslow & Western RY	IN	16.0	F	S	Yes	Yes	Yes	Yes	Yes	003
Almanor RR	CA	13.0	C	S	No	--	No	No	Yes	004
Almador Central RR	CA	11.7	D	S	No	--	No	No	Yes	005
Angelina & Neches River RR	TX	10.0	E	S	Yes	N/R	No	No	No	--
Apache RY	AZ	74.4	F	S	No	--	No	No	Yes	006
Apalachicola Northern RR	FL	96.3	F	S	Yes	Yes	No	No	Yes	007
Arcade & Attica RR	NY	15.0	C	I			No	No	N/R	--
Arcata & Mad River RR	CA	7.7	D	S	No	--	No	No	Yes	008
Arkansas & Louisiana Missouri RY	LA	54.4	F	I	Yes	No	No	No	Yes	009
Ashley, Drew & Northern RY	AR	40.7	G	S	Yes	Yes	Yes	Yes	Yes	010
Atlanta & Saint Andrews Bay RY	FL	81.0	G	S	Yes	Yes	Yes	Yes	Yes	011
Atlantic & Western RY	NC	3.3		I	Yes	No	No	No	Yes	012
Augusta RR	AR	1.5	A	I	Yes	Yes	No	No	Yes	013

*An explanation of these symbols is provided at the end of this appendix.

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Owner-ship	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Baltimore & Annapolis RR	MD	28.0	A	I	Yes	N/R	No	No	N/R	--
Bath & Hammondsport RR	NY	10.0	C	I	Yes	Yes	Yes	Yes	Yes	014
Bauxite & Northern RY	AR	2.9	F	S	Yes	Yes	No	No	Yes	015
Beaufort & Morehead RR	NC	3.3	D	I	Yes	N/R	No	No	No	--
Beech Mountain RR	WV	10.0	B	S	Yes	Yes	No	No	Yes	016
Belfast & Moosehead Lake RR	ME	33.0	E	G	Yes	Yes	No	No	Yes	018
Bellefonte Central RR	PA	18.0	C	I	Yes	Yes	Yes	Yes	Yes	017
Belton RR	TX	6.0	C	I	Yes	Yes	No	No	Yes	019
Bevier & Southern RR	MD	9.0	D	I	Yes	N/R	No	No	No	--
Black River & Western Corp.	NJ	12.0	C	I	Yes	Yes	No	No	N/R	--
Boyne City RR	MI	7.0	A	I			No	No	No	--
Buffalo Creek & Gauley RR	WV	19.0	A	S			No	No	Yes	021
Butte, Anaconda & Pacific RY	MN	32.0	G	S	No	--	No	No	Yes	020
Chicago, West Pullman and Southern Railroad Co. (S&T)	IL	30.6		S	Yes	Yes	Yes	Yes	N/R	--

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Owner-ship	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Cadillac & Lake City RY	MI	11.5	A	I	Yes	Yes	No	No	N/R	--
Cadiz RR	KY	10.3	C	S	Yes	Yes	Yes	Yes	Yes	022
California Western RR	CA	40.0	F	S	No	--	No	No	N/R	--
Cambria & Indiana RR	PA	16.0	G	S	Yes	N/R	No	No	Yes	023
Camino, Placerville & Lake Tahoe RR	CA	8.0	C	S	No	--	No	No	Yes	024
Cape Fear RYS	NC	11.0	C	I	Yes	Yes	Yes	Yes	Yes	025
Cedar Rapids & Iowa City RY	IA	24.7	F	S	Yes	N/R	No	No	Yes	026
Central Iowa Transportation Cooperative	IA	63.4	B	S	Yes	Yes	Yes	Yes	No	--
Central New York RR	NY	22.0	C	I	Yes	Yes	Yes	No	No	--
Chattahoochee Industrial RR	GA	15.4	F	S	Yes	No	No	No	Yes	027
Chattahoochee Valley RR	GA	9.6	B	S	Yes	Yes	Yes	Yes	Yes	028
Chestnut Ridge RY	PA	7.2	E	S	Yes	No	No	No	Yes	029
Chicago & Illinois Midland RY	IL	121.0	G	S	Yes	Yes	No	No	Yes	030
City of Prineville RY	OR	18.0	E	G	No	--	No	No	Yes	031
Claremont & Concord RY	NH	14.0	C	I	Yes	N/R	Yes	No	Yes	032
Clarendon & Pittsford RR	[illegible]	15.0	B	I	Yes	Yes	Yes	No	Yes	033
Cliffside RR	NC	3.7	B	S	Yes	Yes	No	No	Yes	034

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Owner-ship	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Colorado & Wyoming RY	CO	27.8	G	S	No	--	No	No	Yes	035
Columbia & Cowlitz RY	WA	8.5	F	S	No	--	No	No	No	--
Columbus & Greenville RY	MS	167.0	F	I	Yes	Yes	Yes	Yes	N/R	--
Condon, Kinzua & Southern RR	OR	24.0	C	I	No	--	No	No	Yes	036
Cooperstown & Charlotte Valley RY	NY	16.0	B	I	Yes	Yes	Yes	Yes	N/R	--
Corinth & Counce RR	MS	16.0	F	S	Yes	Yes	Yes	Yes	Yes	037
Cotton Plant Fargo RY	AR	6.0	A	S	Yes	N/R	No	No	Yes	038
Dansville & Mount Morris RR	NY	10.0	D	I	Yes	Yes	Yes	Yes	Yes	039
Dardanelle & Russellville RR	AR	5.2	D	S	Yes	Yes	No	No	Yes	040
Delta Valley & Southern RY	AR	2.0	C	I	Yes	N/R	No	No	Yes	041
DeQueen & Eastern RR	AR	45.3	F	S	Yes	Yes	Yes	No	Yes	042
Detroit & Mackinac RY	MI	224.0	G	I	Yes	N/R	No	No	N/R	--
Duluth & Northeastern RR	MN	10.0	F	S	Yes	N/R	No	No	Yes	043
Durham & Southern RY	NC	57.0	F	S	Yes	N/R	Yes	No	Yes	044
East Camden & Highland RR	AR	18.4	C	S	Yes	Yes	Yes	Yes	Yes	045
East Tennessee & Western North Carolina RR	TN	12.0	E	S			No	No	Yes	046
East Washington RY	MD	3.5	D	I	Yes	N/R	No	No	Yes	047

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Ownership	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
El Dorado & Wesson RY	AR	5.6	E	I	Yes	Yes	Yes	Yes	Yes	048
Escanaba & Lake Superior RR	MI	63.0	E	S	Yes	N/R	No	No	Yes	049
Everett RR	PA	3.6	A	I			No	No	Yes	050
Ferdinand RR	IN	6.5	B	S	Yes	N/R	No	No	Yes	051
Fonda, Johnstown & Gloversville RR	NY	20.0	C	I	Yes	Yes	Yes	Yes	Yes	052
Frankfort & Cincinnati RR	KY	6.6	D	I	Yes	Yes	Yes	Yes	Yes	053
Garden City Western RY	KS	13.9	D	S	Yes	N/R	No	No	Yes	054
Genesee & Wyoming RR	NY	12.0	F	I	Yes	Yes	Yes	Yes	Yes	055
Georgetown RR	TX	8.0	F	I	Yes	Yes	No	No	N/R	--
Grafton & Upton RR	MA	15.0	C	S	Yes	N/R	No	No	Yes	056
Graysonia, Nashville & Ashdown RR	AR	31.6	E	I	Yes	Yes	Yes	Yes	Yes	057
Great Western RY	CO	41.8	E	S	No	--	No	No	Yes	058
Green Mountain RR	VT	52.0	D	I	Yes	Yes	Yes	Yes	N/R	--
Greenville & Northern RY	SC	10.0	C	I	Yes	Yes	Yes	Yes	Yes	059
Graham County RR Co.	NC	12.0	C	I	Yes	Yes	Yes	Yes	N/R	--
Great Plains Rwy Co.	NE	84.7	C	I	Yes	Yes	Yes	Yes	N/R	--

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Owner-ship	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Hampton & Branchville RR	SC	17.0	D	I	Yes	Yes	No	No	Yes	060
Hartford & Slocomb RR	AL	22.0	C	I	Yes	Yes	Yes	Yes	Yes	061
Hartwell RY	GA	9.6	B	I	Yes	Yes	Yes	Yes	Yes	062
Hillsboro & North Eastern RY	WI	5.0	A	S	Yes	N/R	No	No	Yes	063
Hollis & Eastern RR	OK	13.0	B	S	Yes	N/R	No	No	Yes	064
Kanawha Central RY	WV	5.0	A	S			No	No	Yes	065
Kelly Creek & Northwestern RR	WV	8.0	E	S	Yes	N/R	No	No	Yes	066
Kentucky & Tennessee RY	KY	10.5	D	S	Yes	Yes	No	No	Yes	067
Klamath Northern RY	OR	10.6	C	S	No	--	No	No	Yes	068
Lake Erie, Franklin and Clarion - RR	PA	15.0	D	I	Yes	N/R	No	No	Yes	069
Lancaster & Chester RY	SC	29.0	E	I	Yes	Yes	Yes	Yes	Yes	070
Laona & Northern RY	WI	7.5	B	S	Yes	N/R	No	No	N/R	--
LaSalle & Bureau County RR	IL	8.6	B	I			No	No	Yes	071
Laurinburg & Southern RR	NC	28.0	D	I	Yes	Yes	Yes	Yes	Yes	072
Livonia, Avon & Lakeville RR	NY	12.0	C	I	Yes	Yes	Yes	Yes	N/R	--
Longview, Portland & Northern RY	OR	44.0	F	S	No	--	No	No	Yes	073

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Owner-ship	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Louisiana & North West RR	LA	6.5	F	I	Yes	N/R	Yes	Yes	No	--
Louisiana & Pine Bluff RY	AR	2.0	A	S			No	No	No	--
Louisiana Midland RY	LA	76.7	B	I	Yes	Yes	No	No	N/R	--
Louisville & Wadley RY	GA	10.2	A	I	Yes	Yes	Yes	Yes	Yes	074
Louisville, New Albany & Corydon RR	IN	7.7	D	S	Yes	Yes	Yes	Yes	Yes	075
Lowville & Beaver River RR	NY	11.0	B	S	Yes	N/R	No	No	Yes	076
Ludington & Northern RY	MI	3.0	D	I	Yes	N/R	No	No	Yes	077
Magma Arizona RR	AZ	28.1	D	S	No	--	No	No	Yes	078
Marinette, Tomahawk & Western RR	WI	15.0	E	S	Yes	N/R	No	No	Yes	079
Maryland & Pennsylvania RR	PA	35.0	D	S	Yes	N/R	No	No	Yes	080
McCloud River RR	CA	77.9	F	S	No	--	No	No	Yes	081
Meridian & Bigbee RR	MS	51.0	G	S	Yes	Yes	Yes	Yes	Yes	082
Middletown & New Jersey RY	NY	14.0	C	S			No	No	Yes	083
Minnesota, Dakota & Western RY	MN		F	S	No	--	No	No	Yes	084
Mississippi & Skuna Valley RR	MS	22.0	C	S	Yes	Yes	No	No	Yes	086
Mississippian RY	MS	24.0	D	I	Yes	N/R	No	No	Yes	085

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Ownership	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Mobile & Gulf RR	AL	12.3	A	I	Yes	No	No	No	Yes	087
Modesto & Empire Traction Co.	CA	5.0	F	I	No	--	No	No	Yes	088
Montpelier & Barre RR	VT	15.0	C	I	Yes	No	Yes	No	Yes	089
Morristown & Erie RR	NJ	12.0	E	I	Yes	No	No	Yes	N/R	--
Moscow, Camden & San Augustine RR	TX	7.0	C	S	Yes	Yes	No	No	N/R	--
Moshassuck Valley RR	RI	1.8	C	I	Yes	No	No	No	Yes	090
Municipality of East Troy	WI	7.0	A	G	No	--	No	No	N/R	--
Narragansett Pier RR	RI	6.2	A	I	Yes	N/R	No	Yes	N/R	--
Nevada Northern RY	NV	148.0	E	S	No	--	No	No	Yes	091
New Hope & Ivyland RR	PA	17.0	C	S	Yes	Yes	No	No	N/R	--
New York, Susquehanna & Western RR	NJ	50.0	F	I	Yes	N/R	No	No	Yes	092
Nezperce RR	ID	13.4	B	I	No	--	No	No	No	--
North Louisiana & Gulf RR	LA	40.0	F	S	Yes	Yes	Yes	Yes	Yes	094
Northampton & Bath RR	PA	7.3	D	S	Yes	No	No	No	Yes	093
Northwestern Oklahoma RR	OK	3.3	B	I	Yes	Yes	No	No	No	--
Norwood & St. Lawrence RR	NY	19.0		G	Yes	Yes	Yes	No	Yes	095

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Owner-ship	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Ocean City Western RR	MD	7.0	B	I	Yes	Yes	Yes	Yes	N/R	--
Ogdensburg Bridge & Port Authority	NY	24.8	A	G	Yes	Yes	Yes	Yes	No	--
Oregon & Northwestern RR	OR	50.0	E	S	No	--	No	No	Yes	097
Oregon, California, & Eastern RY	OR	65.0	E	S	No	--	No	No	Yes	096
Oregon, Pacific & Eastern RY	OR	16.6	D	I	No	--	No	No	N/R	--
Pearl River Valley RR	MS	4.7	C	I	Yes	N/R	No	No	Yes	098
Pecos Valley Southern RY	TX	29.0	D	S	No	--	No	No	Yes	099
Pickens RR	SC	9.0	B	S	Yes	Yes	Yes	Yes	Yes	100
Pittsburg & Shawmut RR	PA	90.0	G	I	Yes	Yes	Yes	Yes	Yes	101
Point Comfort & Northern RY	TX	13.0	F	S	No	--	No	No	Yes	102
Port Huron & Detroit RR	MI	19.0	F	I	Yes	Yes	No	No	Yes	103
Prairie Trunk RY	IL	73.0		I			No	No	No	--
Prescott & Northwestern RR	AR	31.0	D	S	Yes	Yes	Yes	Yes	Yes	104
Providence & Worcester Co.	RI	80.0	F	I	Yes	Yes	Yes	Yes	Yes	105

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Ownership	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Quincy RR	CA	3.3	C	S	No	--	No	No	Yes	106
Rahway Valley RR	NJ	7.1	C	I	Yes	N/R	No	Yes	Yes	107
Rockdale, Sandow & Southern RR	TX	6.0	F	S	No	--	No	No	Yes	108
Roscoe, Snyder & Pacific RY	TX	30.0	F	I	No	--	No	No	Yes	109
Sabine River & Northern RR	TX	31.5	E	S	Yes	No	No	No	Yes	110
St. Johnsbury & Lamoille County RR	VT	96.0	D	G	Yes	Yes	Yes	Yes	No	--
St. Marys RR	GA	18.0	F	S	Yes	Yes	Yes	Yes	Yes	120
Salt Lake Garfield & Western RY	UT	16.0	D	I	No	--	No	No	Yes	111
San Luis Central RR	CO	15.0	C	S	No	--	No	No	Yes	114
San Manuel Arizona RR	AZ	29.4	D	S	No	--	No	No	Yes	115
Sand Springs RY	OK	10.0	F	I	Yes	Yes	No	No	Yes	113
Sandersville RR	GA	9.1	F	I	Yes	N/R	No	No	Yes	112
Santa Maria Valley RR	CA	14.8	F	I	No	--	No	No	Yes	116
Sierra RR	CA	57.4	D	I	No	--	No	No	N/R	--
Skaneateles Short Line RR	NY	3.0	B	S	Yes	No	No	No	Yes	117

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Ownership	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Southern Indiana RY	IN	5.5	D	I	Yes	Yes	Yes	Yes	Yes	118
Southern San Luis Valley RR	CO	1.0	A	I	No	--	No	No	Yes	119
Stockton Terminal & Eastern RR	CA	14.0	F	I	No	--	No	No	No	--
Strasburg RR	PA	5.0	E	I	Yes	Yes	Yes	Yes	N/R	--
Sumter & Choctaw RY	AL	3.6	B	S	Yes	N/R	No	No	Yes	121
Texas & Northern RY	TX	7.6	G	S	Yes	N/R	No	No	Yes	123
Texas Central RR	TX	25.0	C	S	Yes	No	No	No	Yes	122
Texas Export RR	TX	57.0	C	I	Yes	Yes	No	No	No	--
Texas, Oklahoma & Eastern RR	OK	40.0	G	S	Yes	Yes	Yes	No	Yes	124
Texas South-Eastern RR	TX	21.0	E	I	Yes	N/R	No	No	Yes	125
Toledo, Angola & Western RY	OH	8.0	B	S			No	No	N/R	--
Tooele Valley RY	UT	7.0	A	S	No	--	No	No	Yes	126
Trona RY	CA	31.0	F	S	No	--	No	No	Yes	127
Tucson Cornelia & Gila Bend RR	AZ	43.3	E	S	No	--	No	No	No	--
Tulsa - Sapulpa Union RY	OK	10.0	D	I	Yes	No	No	No	Yes	128
Twin Branch RR	IN	2.0	C	S	Yes	No	No	No	Yes	129

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Owner-ship	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
Union Railroad of Oregon	OR	2.1	A	I	No	--	No	No	No	--
Union Transportation Co.	NJ	19.0	A	I			No	No	Yes	131
Unity RY	PA	4.0	C	S			No	No	Yes	130
Utah RY	UT	102.0	F	S	No	--	No	No	Yes	132
Valdosta Southern RR	GA	10.2	F	S	Yes	No	No	No	Yes	133
Valley and Siletz RR	OR	40.6	E	S	No	--	No	No	Yes	134
Ventura County RY	CA	10.5	E	I	No	--	No	No	Yes	135
Vermont RY	VT	129.0	F	I	Yes	Yes	Yes	Yes	Yes	136
Virginia Blue Ridge RY	VA	10.0	C	I			No	No	Yes	137
Virginia Central RY	VA	1.0	A	I			No	No	Yes	138
Ware Shoals RR	SC	5.0	B	S	Yes	N/R	No	No	Yes	139
Warren & Saline River RR	AR	15.6	B	S	Yes	N/R	Yes	No	Yes	140
Warrenton RR	NC	3.0	A	G	Yes	Yes	Yes	Yes	Yes	141
Warwick RY	RI	1.0	B	I			No	No	Yes	142
Wellsville, Addison & Caleton RR	PA	40.0	C	I	Yes	Yes	Yes	No	Yes	143
West Virginia Northern RR	WV	11.0	A	I	Yes	Yes	Yes	Yes	Yes	144
Valley Railroad Co.	CT			I	Yes	Yes	Yes	Yes	No	--

General Information					Carrier Interviews				Data Analysis	
Name of Carrier	State	Miles	Revenue Class	Owner-ship	Letter Sent	Postcard Response	Personal Interview	On-Site Interview	ICC Data Available	Sample ID Number
White Sulfur Springs & Yellowstone Park RY	MN	23.0	B	I	No	--	No	No	Yes	145
Winchester & Western RR	VA	18.0	C	I	Yes	Yes	Yes	Yes	No	--
Winfield RR	PA	9.0	C	S	Yes	Yes	Yes	Yes	No	--
Winifrede RR	WV	6.8	E	S	Yes	No	No	No	Yes	146
Wolfeboro RR	NH	12.0	C	I			No	No	Yes	147
Yancey RR	NC	13.0	B	I			No	No	No	--
Yreka Western RR	CA	9.0	D	I	No	--	No	No	Yes	148

Explanation of Revenue Class abbreviations in terms of annual gross operating revenues:

Revenue Class	Operating Revenues	Revenue Class	Operating Revenues
A	$ - 50,000	E	$ 500,001 - 1,000,000
B	50,001 - 100,000	F	1,000,001 - 3,000,000
C	100,001 - 250,000	G	3,000,001 - 4,999,999
D	250,001 - 500,000		

Through December 31, 1975, during which time the authors completed this study, a Class I railroad was defined as one having average annual gross operating revenues of $5 million and higher. On January 1, 1976, a Class I railroad was reclassified as one having average annual gross operating revenues of $10 million and Higher.

Explanation of Ownership abbreviations:

I - Independent S - Shipper/Industry G - Governmental Unit

Explanation of N/R symbol:

a) In column labelled postcard response, N/R indicates "No Response."
b) In column labelled ICC data available, N/R indicates "Not Requested."

APPENDIX 4

INITIAL CONTACT LETTER TO RAILROADS
AND POSTCARD USED FOR RESPONSES

THE UNIVERSITY OF TENNESSEE
KNOXVILLE 37916
COLLEGE OF BUSINESS ADMINISTRATION

DEPARTMENT OF MARKETING AND TRANSPORTATION TELEPHONE: (615) 974-5311

We are currently developing a guidebook that will aid local groups in determining the best methods to preserve railroad service when a Class I carrier wants to abandon that service. Because of your experience in short line railroading, we are asking you to assist us in our efforts, through your advice and counsel. Although some data is available on short lines, the best potential sources of information needed to produce a really useful guidebook are the people who have the know-how and experience in short line railroading, individuals like yourself.

The book is designed specifically to show local groups how to evaluate the potential success of an independent short line operation as an alternative to the service abandoned by the larger carrier. Your ideas are needed on such things as working with the large carriers on revenue divisions and connecting services, the most effective means of controlling train costs and performing equipment and right-of-way maintenance, and identifying pitfalls the local operator may encounter as he plans and initiates a short line operation.

Rather than distribute a lengthy questionnaire that requires time to answer and cannot fit the pecularities of each carrier, our plan is to visit a number of short line properties, such as your own, and talk for an hour or so about the problems of short line railroading. Therefore, we will be most appreciative if you will allow us to visit with you to talk about your line and your experiences in this business. If you want the information you provide to be treated confidentially your wishes certainly will be respected.

Please indicate on the enclosed postcard, whether or not you are willing to assist us. If you decide to participate we will call you to arrange a visiting time that will be convenient for you.

Thank you very much for your consideration of this request.

Very Sincerely,

Edwin P. Patton,
Associate Professor of
Transportation

C. John Langley, Jr.
Assistant Professor of
Marketing & Transportation

Enclosure (1)

NOTE: A reply by June 16 would be appreciated since interviews will begin by July 1.

In response to your recent request:

☐ I am willing to be interviewed.
Please call me at ____ - ____ - ______

to set up a visit time.

☐ I am unable to contribute to your study at this time.

Signed: ________________________

APPENDIX 5

CARRIER ANNUAL REPORT PAGES OF INTEREST

Source: Interstate Commerce Commission, Annual Report to the Interstate Commerce Commission--Class II Railroads (Form R-2), Washington, D.C.: U.S. Government Printing Office, 1974. Pages 28, 30, 32, 34, and 35.

2002. RAILWAY OPERATING EXPENSES

1 State the railway operating expenses of the respondent for the year, classifying them in accordance with the Uniform System of Accounts for Railroad Companies.

2 Any unusual accruals involving substantial amounts included in column (*b*) should be fully explained in a footnote.

Line No.	Name of railway operating expense account (a)	Amount of operating expenses for the year (b)	Line No.	Name of railway operating expense account (a)	Amount of operating expenses for the year (b)
		$			$
	MAINTENANCE OF WAY STRUCTURES			TRANSPORTATION—RAIL LINE	
1	(2201) Superintendence		28	(2241) Superintendence and dispatching	
2	(2202) Roadway maintenance		29	(2242) Station service	
3	(2203) Maintaining structures		30	(2243) Yard employees	
4	(2203½) Retirements—Road		31	(2244) Yard switching fuel	
5	(2204) Dismantling retired road property		32	(2245) Miscellaneous yard expenses	
6	(2208) Road property—Depreciation		33	(2246) Operating joint yards and terminals—Dr	
7	(2209) Other maintenance of way expenses		34	(2247) Operating joint yards and terminals—Cr	
8	(2210) Maintaining joint tracks, yards and other facilities—Dr		35	(2248) Train employees	
9	(2211) Maintaining joint tracks, yards, and other facilities—Cr		36	(2249) Train fuel	
10	Total maintenance of way and structures		37	(2251) Other train expenses	
	MAINTENANCE OF EQUIPMENT		38	(2252) Injuries to persons	
11	(2221) Superintendence		39	(2253) Loss and damage	
12	(2222) Repairs to shop and power-plant machinery		40	(2254)* Other casualty expenses	
13	(2223) Shop and power-plant machinery—Depreciation		41	(2255) Other rail and highway transportation expenses	
14	(2224) Dismantling retired shop and power-plant machinery		42	(2256) Operating joint tracks and facilities—Dr	
15	(2225) Locomotive repairs		43	(2257) Operating joint tracks and facilities—Cr	
16	(2226) Car and highway revenue equipment repairs		44	Total transportation—Rail line	
				MISCELLANEOUS OPERATIONS	
17	(2227) Other equipment repairs				
18	(2228) Dismantling retired equipment		45	(2258) Miscellaneous operations	
19	(2229) Retirements—Equipment		46	(2259) Operating joint miscellaneous facilities—Dr	
20	(2234) Equipment—Depreciation		47	(2260) Operating joint miscellaneous facilities—Cr	
				GENERAL	
21	(2235) Other equipment expenses				
22	(2236) Joint maintenance of equipment expenses—Dr		48	(2261) Administration	
23	(2237) Joint maintenance of equipment expenses—Cr		49	(2262) Insurance	
24	Total maintenance of equipment		50	(2264) Other general expenses	
	TRAFFIC		51	(2265) General joint facilities—Dr	
25	(2240) Traffic expenses		52	(2266) General joint facilities—Cr	
26			53	Total general expenses	
27			54	Grand Total Railway Operating Expenses	

55 Operating ratio (ratio of operating expenses to operating revenues), ______ percent. (Two decimal places required.)

2003. MISCELLANEOUS PHYSICAL PROPERTIES OPERATED DURING THE YEAR

Give particulars of each class of miscellaneous physical property or plant operated during the year. Group the properties under the heads of the classes of operations to which they are devoted.

In column (*a*) give the designation used in the respondent's records and the name of the town or city and State in which the property or plant is located, stating whether the respondent's title is that of ownership or whether the property is held under lease or other incomplete title. All peculiarities of title should be explained in a footnote.

The totals of columns (*b*), (*c*), and (*d*) should agree with the totals of accounts Nos. 502, "Revenue from Miscellaneous operations," 534, "Expenses of miscellaneous operations," and 535, "Taxes on miscellaneous operating property" in respondent's Income Account for the Year. If not, differences should be explained in a footnote.

Line No.	Designation and location of property or plant, character of business, and title under which held (a)	Total revenue during the year (Acct. 502) (b)	Total expenses during the year (Acct. 534) (c)	Total taxes applicable to the year (Acct. 535) (d)
		$	$	$
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11	Total			

2201. INCOME FROM NONOPERATING PROPERTY

Line No.	Designation (a)	Revenues or income (b)	Expenses (c)	Net income or loss (d)	Taxes (e)
1		$	$	$	$
2					
3					
4					
5					
6					
7	Total				

2202. MILEAGE OPERATED (ALL TRACKS)†

Give particulars called for concerning all tracks operated by respondent at the close of the year. Way swtiching tracks include station, team, industry, and other switching tracks for which no separate switching service is maintained. Yard switching tracks include classification, house, team, industry, and other tracks switched by yard locomotives in yards where separate switching services are maintained. Tracks belonging to an industry for which no rent is payable should not be reported. Switching and Terminal Companies report on line 6 only.

Line No.	Line in use (a)	Owned (b)	Proprietary companies (c)	Leased (d)	Operated under contract (e)	Operated under trackage rights (f)	Total operated (g)
1	Single or first main track						
2	Second and additional main tracks						
3	Passing tracks, cross-overs, and turn-outs						
4	Way switching tracks						
5	Yard switching tracks						
6	Total						

2203. MILEAGE OPERATED—BY STATES

Line Haul Railways show single track only.
Switching and Terminal Companies show all tracks.

Line No.	State (a)	Owned (b)	Proprietary companies (c)	Leased (d)	Operated under contract (e)	Operated under trackage rights (f)	Total operated (g)
1							
2							
3							
4							
5							
6	Total						

2215. Show, by States, mileage of tracks owned but not operated by respondent: First main track, ______; second and additional main tracks, ______ industrial tracks, ______; yard track and sidings, ______; total, all tracks, ______.†

2216 Road is completed from (Line Haul Railways only)* ______ to ______. Total distance, ______ miles.

2217 Road located at (Switching and Terminal Companies only)* ______

2218 Gage of track ______ ft. ______ in. 2219. Weight of rail ______ lb. per yard.

2220 Kind and number per mile of crossties ______

2221 State number of miles electrified: First main track, ______; second and additional main tracks, ______; passing tracks, cross-overs, and turn-outs, ______; way switching tracks, ______; yard switching tracks, ______

2222 Ties appliedin replacement during year: Number of crossties, ______; average cost per tie, $ ______; numberof feet (B. M.) of swltch and bridge ties, ______; average cost per M feet (B. M.), $ ______

2223 Rail applied in replacement during year: Tons (2,000 pounds), ______; weight per yard, ______; average cost per ton, $ ______

* Insert names of places. †Mileage should be stated to the nearest whole mile.

2401. EMPLOYEES, SERVICE, AND COMPENSATION

1 Give particulars of the average number of employees of various classes in the service of the respondent, of service rendered by such employees, and of compensation paid therefor during the year. Employees are to be counted and classified and their service and compensation reported in accordance with the Commission's Rules Governing the Classification of Railroad Employees and Reports of their Service and Compensation, effective January 1, 1951.

2 Averages called for in column (b) should be the average of twelve middle-of-month counts.

3 Pensioners rendering no service are not to be included in the count, nor is any compensation paid them to be included hereunder.

4 If any of the general officers served without compensation or were carried on the payrolls of another company, those facts should be stated in a footnote.

5. If any compensation was paid or is payable under labor awards of the current year, include the amount applicable to the current year in column *(d)* and show the portion applicable to prior years (back pay) in a footnote, by groups of employees. For purposes of this report, labor awards are intended to cover adjustments resulting from the decisions of Wage Boards and voluntary awards by the respondent incident thereto.

6. This schedule does not include old-age retirements, and unemployment insurance taxes.

Line No.	Classes of employees (a)	Average number of employees (b)	Total service hours (c)	Total compensation (d)	Remarks (e)
1	Total (executives, officials, and staff assistants)			$	
2	Total (professional, clerical, and general)				
3	Total (maintenance of way and structures)				
4	Total (maintenance of equipment and stores)				
5	Total (transportation—other than train, engine, and yard)				
6	Total (transportation-yardmasters, switch tenders, and hostlers)				
7	Total, all groups (except train and engine)				
8	Total (transportation—train and engine)				
9	Grand Total				

Amount of foregoing compensation (excluding back pay for prior years) that is chargeable to account No. 531, "Railway operating expenses" $ ____

2402. CONSUMPTION OF FUEL BY MOTIVE-POWER UNITS

1 Show hereunder the quantities of the various kinds of fuel consumed by locomotives and motor or other self-propelled rail cars in the service of respondent during the year, and the number of kilowatt-hours for such tractive equipment as was propelled by electricity.

2 The ton of 2,000 pounds should be used.

Line No.	Kind of service	A. Locomotives (diesel, electric, steam, and other)					B. Rail motor cars (gasoline, oil-electric, etc.)		
		Diesel oil (gallons)	Gasoline (gallons)	Electricity (kilowatt-hours)	Steam		Electricity (kilowatt-hours)	Gasoline (gallons)	Diesel oil (gallons)
					Coal (tons)	Fuel oil (gallons)			
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	Freight								
2	Passenger								
3	Yard switching								
4	Total transportation								
5	Work train								
6	Grand total								
7	Total cost of fuel*			xxxxxx			xxxxxx		

*Show cost of fuel charged to yard and train service (accounts Nos. 2244 and 2249). The cost stated for the various kinds of fuel should be the total charges in the accounts specified, including freight charges and handling expenses. The cost stated for electric current should be the total charges in the accounts enumerated. Fuel and power consumed by mixed and special trains that are predominantly freight should be included in freight service, but where the service of mixed or special trains is predominantly passenger, the fuel and power used should be included in passenger service.

2601. STATISTICS OF RAIL-LINE OPERATIONS. [For Road Haul Traffic Only]

Give the various statistical items called for concerning the rail-line operations of respondent's road during the year. Motor car ano trailer miles, if any, should be included. Highway traffic to be excluded. Locomotive unit-miles should include all miles made by each locomotive unit. Use 150 pounds as the average weight per passenger and four tons as the average weight of contents of each head-end car.

Line No	Item (a)	Freight trains (b)	Passenger trains (c)	Total transportation service (d)	Work trains (e)
1	Average mileage of road operated (whole number required)				xxxxxx
	Train-miles				
2	Total (with locomotives)				
3	Total (with motorcars)				
4	Total train-miles				
	Locomotive unit-miles				
5	Road service				xxxxxx
6	Train switching				xxxxxx
7	Yard switching				xxxxxx
8	Total locomotive unit-miles				xxxxxx
	Car-miles				
9	Loaded freight cars				xxxxxx
10	Empty freight cars				xxxxxx
11	Caboose				xxxxxx
12	Total freight car-miles				xxxxxx
13	Passenger coaches				xxxxxx
14	Combination passenger cars (mail, express, or baggage, etc., with passenger)				xxxxxx
15	Sleeping and parlor cars				xxxxxx
16	Dining, grill and tavern cars				xxxxxx
17	Head-end cars				xxxxxx
18	Total (lines 13, 14, 15, 16 and 17)				xxxxxx
19	Business cars				xxxxxx
20	Crew cars (other than cabooses)				xxxxxx
21	Grand total car-miles (lines 12, 18, 19 and 20)				xxxxxx
	Revenue and nonrevenue freight traffic				
22	Tons—revenue freight	xxxxxx	xxxxxx		xxxxxx
23	Tons—nonrevenue freight	xxxxxx	xxxxxx		xxxxxx
24	Total tons—revenue and nonrevenue freight	xxxxxx	xxxxxx		xxxxxx
25	Ton-miles—revenue freight	xxxxxx	xxxxxx		xxxxxx
26	Ton-miles—nonrevenue freight	xxxxxx	xxxxxx		xxxxxx
27	Total ton-miles—revenue and nonrevenue freight	xxxxxx	xxxxxx		xxxxxx
	Revenue passenger traffic				
28	Passengers carried—revenue	xxxxxx	xxxxxx		xxxxxx
29	Passenger-miles—revenue	xxxxxx	xxxxxx		xxxxxx

NOTES AND REMARKS

2602. REVENUE FREIGHT CARRIED DURING THE YEAR (For Road Haul Traffic Only)

1 Give the particulars called for concerning the commodities carried by the respondent during the year, the revenue from which is includible in account No 101, *Freight*, on the basis of the 2-digit codes named in 49 C F R 123.52, by Order of September 13, 1963 In stating the number of tons received from connecting carriers *(c)*, include all connecting carriers, whether rail or water and whether the freight is received directly or indirectly (as through elevators)

2 Under Order of December 16, 1964, traffic involving less than three shippers reportable in any one commodity class may be excluded from this schedule, but must be submitted unbound in a separate schedule supplemental to this one and marked *Supplemental* Extra copies of Schedule 2602 may be obtained upon request to the Interstate Commerce Commission Bureau of Accounts, Washington, D C , 20423 If a supplemental schedule is filed, check the space provided at the bottom of this schedule Supplemental reports will be withheld from public inspection

3 Particulars for Codes 01 to 46 inclusive, should include all traffic moved in lots of 10,000 pounds or more Forwarder traffic includes freight traffic shipped by or consigned to any forwarder holding a permit under part IV of the Interstate Commerce Act Code 47 should include all traffic moved in lots of less than 10,000 pounds

4 *Gross freight revenue* means respondent's gross freight revenue without adjustment for absorption or corrections

Line No.	Commodity		Revenue freight in tons (2,000 pounds)			
	Description (a)	Code No	Originating on respondent's road (b)	Received from connecting carriers (c)	Total carried (d)	Gross freight revenue (dollars) (e)
1	Farm products	01				
2	Forest products	08				
3	Fresh fish and other marine products	09				
4	Metallic ores	10				
5	Coal	11				
6	Crude petro, nat gas, & nat gsln	13				
7	Nonmetallic minerals, except fuels	14				
8	Ordnance and accessories	19				
9	Food and kindred products	20				
10	Tobacco products	21				
11	Textile mill products	22				
12	Apparel & other finished tex prd inc knit	23				
13	Lumber & wood products, except furniture	24				
14	Furniture and fixtures	25				
15	Pulp, paper and allied products	26				
16	Printed matter	27				
17	Chemicals and allied products	28				
18	Petroleum and coal products	29				
19	Rubber & miscellaneous plastic products	30				
20	Leather and leather products	31				
21	Stone, clay, glass & concrete prd	32				
22	Primary metal products	33				
23	Fabr metal prd, exc ordn, machy & transp	34				
24	Machinery, except electrical	35				
25	Electrical machy, equipment & supplies	36				
26	Transportation equipment	37				
27	Instr, phot & opt gd, watches & clocks	38				
28	Miscellaneous products of manufacturing	39				
29	Waste and scrap materials	40				
30	Miscellaneous freight shipments	41				
31	Containers, shipping, returned empty	42				
32	Freight forwarder traffic	44				
33	Shipper Assn or similar traffic	45				
34	Misc mixed shipment exc fwdr & shpr assn	46				
35	Total, carload traffic					
36	Small packaged freight shipments	47				
37	Total, carload & lcl traffic					

[ ]This report includes all commodity statistics for the period covered.

[ ]A supplemental report has been filed covering traffic involving less than three shippers reportable in any one commodity code

[ ]Supplemental Report NOT OPEN TO PUBLIC INSPECTION

ABBREVIATIONS USED IN COMMODITY DESCRIPTIONS

Assn	Association	Inc	Including	Nat	Natural	Prd	Products
Exc	Except	Instr	Instruments	Opt	Optical	Shpr	Shipper
Fabr	Fabricated	LCL	Less than carload	Ordn	Ordnance	Tex	Textile
Fwdr	Forwarder	Machy	Machinery	Petro	Petroleum	Transp	Transportation
Gd	Goods	Misc	Miscellaneous	Phot	Photographic		
Gsln	Gasoline						

APPENDIX 6

CODE SHEET

CODE SHEET

RAILROAD ABANDONMENT STUDY

Card #1 of 8

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
1-3	ID			RR IDENT #	001-148 F3.0
4				CARD #	"1"
5					
6-10	RDWYMNT	2202	2	Roadway Maintenance	(000) F5.1 MV=9999.9
11-15	STRMNT	2203	3	Maintaining Structures	(000) F5.1 MV=9999.9
16-20	TOTMOWS	2002	10	Total-Maintenance of Way and Structures	(000) F5.1 MV=9999.9
21-25	LOCOREP	2225	15	Locomotive Repairs	(000) F5.1 MV=9999.9
26-30	EQUIPREP	2226	16	Car & Highway Revenue Equipment Repairs	(000) F5.1 MV=9999.9
31-35	EQDEPR	2234	20	Equipment Depreciation	(000) F5.1 MV=9999.9
36-40	TOTMOE	2002	24	Total Maintenance of Equipment	(000) F5.1 MV=9999.9

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
41-45	TRAFFIC	2240	25+26+27	Traffic	(000) F5.1 MV=9999.9
46-50	STASVC	2242	29	Station Service	(000) F5.1 MV=9999.9
51-55	EMPLOY	2243 + 2248	30 + 35	Yard Employees & Train Employees	(000) F5.1 MV=9999.9
56-60	TOTTRANS	2002	44	Total Transportation - Rail Line	(000) F5.1 MV=9999.9
61-65	ADMIN	2261	48	Administration	(000) F5.1 MV=9999.9
66-70	INS	2262	49	Insurance	(000) F5.1 MV=9999.9
71-75	TOTGEN	2002	53	Total General Expenses	(000) F5.1 MV=9999.9
76-80	GRANDTOT	2002	54	Grand Total Railway Operating Expenses	(000) F5.1 MV=9999.9

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
1-3	ID			RR IDENT. #	F3.0 001-148
4				CARD #	"2"
5-7	OPRATIO	2002	55	Operating Ratio	F3.0 (round to nearest whole #) MV=999
8-12	REVMISC	2003	11b	Total Revenue-Misc. Physical Properties	F5.0 MV=99999
13-17	REVNONOP	2201	7b	Revenues from Nonoperating Properties	F5.0 MV=99999
18-22	PFTNONOP	2201	7d	Net Income or Loss from Nonoperating Properties	F5.0 MV=99999
23-26	TRAKMAIN	2202	1g + 2g	Main Track Mileage	F4.0 MV=9999
27-30	TRAKTOT	2202	6g	Total Track Operated	F4.0 MV=9999
31	WTLE59	2219		Weight of Rail $\leq$ 59	1-Yes 0-No F1.0 MV=9
32	WT60T69	2219		Weight of Rail 60-69	1-Yes 0-No F1.0 MV=9

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
33	WT70T79	2219		Weight of Rail 70-79	1-Yes 0-No F1.0 MV=9
34	WT80T89	2219		Weight of Rail 80-89	1-Yes 0-No F1.0 MV=9
35	WT90T99	2219		Weight of Rail 90-99	1-Yes 0-No F1.0 MV=9
36	WTEQ100	2219		Weight of Rail 100	1-Yes 0-No F1.0 MV=9
37	WTGT100	2219		Weight of Rail > 100	1-Yes 0-No F1.0 MV=9
38-41	TIESMILE	2220		Number of Crossties/Mile	F4.0 MV=9999
42-46	TIESREPL	2222		Ties Replaced in 1974	F5.0 MV=99999
47-48	EXECEMP	2401	1b	Avg. Employees-Line 1 (Exec, Officials, and Staff Asst's)	Actual Number F2.0 MV=99

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
49-54	EXECHRS	2401	1c	Total Svc hours-Line 1 (Exec, Officials and Staff Asst's)	(000) F6.1 MV=99999.9
55-60	EXECCMP	2401	1d	Total Compensation - Line 1 (Exec, Officials and Staff Asst's)	(000) F6.1 MV=99999.9
61-63	NONOPEMP	2401	7b	Avg. Employees Line 7 (All Except Train and Engine)	Actual Number F3.0 MV=999
64-69	NONOPHRS	2401	7c	Total Svc. Hours-Line 7 (All Except Train and Engine)	(000) F6.1 MV=99999.9
70-75	NONOPCMP	2401	7d	Total Compensation Line 7 (All Except Train and Engine)	(000) F6.1 MV=99999.9
76-78	OPEREMP	2401	8b	Avg. Employees-Line 8 (Train and Engine)	Actual Number F3.0 MV=999

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
1-3	ID			RR IDENT #	001-148 F3.0
4				CARD#	"3"
6-11	OPERHRS	2401	8c	Total Svc. Hours Line 8 (Train and Engine)	(000) F6.1 MV=99999.9
12-17	OPERCMP	2401	8d	Total Compensation Line 8 (Train and Engine)	(000) F6.1 MV=99999.9
18	DSLONLY	2402		Is diesel oil the only locomotive fuel used?	1-Yes 0-No F1.0 MV=9
20-25	DSLGALS	2402	6b	Gallons of Diesel Oil Consumed	(000) Gallons F6.1 MV=99999.9

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
26-29	MLSTRAIN	2601	4b	Total Train Miles	(000) F4.1 MV=999.9
30-33	MLSLOCRS	2601	5b	Locomotive Unit Miles (Road Service)	(000) F4.1 MV=999.9
34-37	MLSLOCTS	2601	6b	Locomotive Unit Miles (Train Switching)	(000) F4.1 MV=999.9
38-41	MLSLOCYS	2601	7b	Locomotive Unit Miles (Yard Switching)	(000) F4.1 MV=999.9
42-46	CRMLSLOD	2601	9b	Car-Miles (Loaded)	(000) F5.1 MV=9999.9
47-51	CRMLSEMP	2601	10b	Car-Miles (Empty)	(000) F5.1 MV=9999.9

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
52-56	CRMLSTOT	2601	12b	Car-Miles (Total)	(000) F5.1 MV=9999.9
57-60	TONSREV	2601	22d	Tons-Revenue Freight	(000) F4.0 MV=9999
61-64	TONSTOT	2601	24d	Total Tons (Rev + Nonrev)	(000) F4.0 MV=9999
65-70	TNMLSREV	2601	25d	Ton-Miles Revenue Freight	(000) F6.0 MV=999999
71-76	TNMLSTOT	2601	27d	Total Ton-Miles (Rev + Nonrev)	(000) F6.0 MV=999999

Columns	VARIABLE	Data from R-2 SCHEDULE #	Data from R-2 Line #	Description	Code
1-3	ID			RR IDENT#	001-148 F3.0
4				CARD#	"4"
5-6	COMM1	2602		Highest Tonnage Commodity Code#	F2.0 MV=99
7-10	TONS1	2602	Col. d	Total Tons: Carried	(000) F4.0 MV=9999
11-14	REV1	2602	Col. e	Gross Frt. Rev.	(000) F4.0 MV=9999

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
15-16	COMM2	2602		2nd Highest	F2.0 MV=99
17-20	TONS2	2602	Col. d		(000) F4.0 MV=9999
21-24	REV2	2602	Col. e		(000) F4.0 MV=9999
25-26	COMM3	2602		3rd Highest	F2.0 MV=99
27-30	TONS3	2602	Col. d		(000) F4.0 MV=9999
31-34	REV3	2602	Col. e		(000) F4.0 MV=9999

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
35-36	COMM4	2602		4th Highest	F2.0 MV=99
37-40	TONS4	2602	Col. d		(000) F4.0 MV=9999
41-44	REV4	2602	Col. e		(000) F4.0 MV=9999
45-46	COMM5	2602		5th Highest	F2.0 MV=99
47-50	TONS5	2602	Col. d		(000) F4.0 MV=9999
51-54	REV5	2602	Col. e		(000) F4.0 MV=9999

Columns	VARIABLE	Data from R-2 SCHEDULE #	Line #	Description	Code
55-58	TONSORIG	2602	37b	Total Rev Frt. Tons Originating	(000) F4.0 MV=9999
59-62	TONSRECD	2602	37c	Total Rev Freight Tons Received	(000) F4.0 MV=9999
63-66	TOTTNSRV	2602	37d	Total Tons Rev. Freight Carried	(000) F4.0 MV=9999
67-70	GROSSREV	2602	37e	Gross Freight Revenue	(000) F4.0 MV=9999

Card #5 of 8

Columns	Variable	Transformation	Description	Code
1-3	ID		RR IDENT #	001-148 F3.0
4			CARD #	"5"
6-10	PCTMOWS	TOTMOWS/GRANDTOT x 100	TOTMOWS as a percentage of GRANDTOT	F5.1 MV=9999.9
11-15	PCTMOE	TOTMOE/GRANDTOT x 100	TOTMOE as a percentage of GRANDTOT	F5.1 MV=9999.9
16-20	PCTTRAF	TRAFFIC/GRANDTOT x 100	TRAFFIC as a percentage of GRANDTOT	F5.1 MV=9999.9
21-25	PCTTRAN	TOTTRANS/GRANDTOT x 100	TOTTRANS as a percentage of GRANDTOT	F5.1 MV=9999.9
26-30	PCTEMPL	EMPLOY/GRANDTOT x 100	EMPLOY as a percentage of GRANDTOT	F5.1 MV=9999.9
31-35	PCTGEN	TOTGEN/GRANDTOT x 100	TOTGEN as a percentage of GRANDTOT	F5.1 MV=9999.9
36-41	TOTEMP	EXECEMP + NONOPEMP + OPEREMP	Total Number of Employees	F6.1 MV=99999.9
42-47	TOTHRS	EXECHRS + NONOPHRS + OPERHRS	Total Service Hours-All Employees	F6.1 MV=99999.9
48-53	TOTCMP	EXECCMP + NONOPCMP +OPERCMP	Total Compensation-All Employees	F6.1 MV=99999.9

Card #5 of 8

Columns	Variable	Source	Description	Code
54-55	NUMLOCS	Lewis, <u>Short Line Railway Guide</u>	Number of Locomotives	F2.0 MV=99.
56-60	TOTHP	Lewis, <u>Short Line Railway Guide</u>	Total Horsepower -All Locomotives	F5.0 MV=99999.
61-62	STATE		State in which located	A2
63	TERRTY		ICC District in which located 1=Eastern 2=Southern 3=Western	F1.0
64-65	NUMCONNS	Lewis, <u>Short Line Railway Guide</u>	Number of Connecting Carriers	F2.0
66	OWNRSHP		Ownership Type 0=Independent 1=Shipper/Industry 2=Governmental Unit	F1.0

Card #5 of 8

Columns	Variable	Transformation Used	Description	Code
67-72	XTOTMOWS	TOTMOWS/TRAKMAIN	TOTMOWS per mile	F6.1 MV=99999.
73-78	XTOTMOE	TOTMOE/TRAKMAIN	TOTMOE per mile	F6.1 MV=99999.

Columns	Variable	Transformation Used	Description	Code
1-3	ID		RR IDENT #	001-148 F3.0
4			CARD #	"6"
6-11	XTRAFFIC	TRAFFIC/TRAKMAIN	TRAFFIC per mile	F6.1 MV=99999.
12-17	XTOTRANS	TOTTRANS/TRAKMAIN	TOTTRANS per mile	F6.1 MV=99999.
18-23	XTOTGEN	TOTGEN/TRAKMAIN	TOTGEN per mile	F6.1 MV=99999.
24-29	XGRNDTOT	GRANDTOT/TRAKMAIN	GRANDTOT per mile	F6.1 MV=99999.
30-35	XTIESREP	TIESREPL/TRAKMAIN	TIESREPL per mile	F6.1 MV=99999.
36-41	XEXECEMP	EXECEMP/TRAKMAIN	EXECEMP per mile	F6.1 MV=99999.
42-47	XNONOPEM	NONOPEMP/TRAKMAIN	NONOPEMP per mile	F6.1 MV=99999.
48-53	XOPEREMP	OPEREMP/TRAKMAIN	OPEREMP per mile	F6.1 MV=99999.
54-59	XTOTEMP	TOTEMP/TRAKMAIN	TOTEMP per mile	F6.1 MV=99999.
60-65	XTOTHRS	TOTHRS/TRAKMAIN	TOTHRS per mile	F6.1 MV=99999.
66-71	XTOTCMP	TOTCMP/TRAKMAIN	TOTCMP per mile	F6.1 MV=99999.
72-77	XMLSTRAN	MLSTRAIN/TRAKMAIN	MLSTRAIN per mile	F61 MV=99999.

Columns	Variable	Transformation Used	Description	Code
1-3	ID		RR IDENT #	001-148 F3.0
4				"7"
6-11	XCRMLTOT	CRMLSTOT/TRAKMAIN	CRMLSTOT per mile	F6.1 MV=99999.
12-17	XTONSTOT	TONSTOT/TRAKMAIN	TONSTOT per mile	F6.1 MV=99999.
18-23	XTNMLTOT	TNMLSTOT/TRAKMAIN	TNMLSTOT per mile	F6.1 MV=99999.
24-29	XTOTNSRV	TOTTNSRV/TRAKMAIN	TOTTNSRV per mile	F6.1 MV=99999.
30-35	XGROSREV	GROSSREV/TRAKMAIN	GROSSREV per mile	F6.1 MV=99999.
36-42	AVWAGOFF	EXECCMP/EXECHRS	Avg Hourly Wage Exec-Offs-Assts	F7.2 MV=99999.
43-49	AVWAGNOP	NONOPCMP/NONOPHRS	Avg Hourly Wage Nonoperating	F7.2 MV=99999.
50-56	AVWAGOP	OPERCMP/OPERHRS	Avg Hourly Wage Train and Engine	F7.2 MV=99999.
57-63	AVWAGTOT	TOTCMP/TOTHRS	Avg Hourly Wage All Employees	F7.2 MV=99999.
64	EASTERN	if TERRTY=1	Eastern District 1=Yes 0=No	F1.0

(continued)

Columns	Variable	Transformation Used	Description	Code
65	SOUTHERN	if TERRTY=2	Southern District 1=Yes 0=No	F1.0
66	WESTERN	if TERRTY=3	Western District 1=Yes 0=No	F1.0
67	INDEP	if OWNRSHP=0	Independent Owner-ship 1=Yes 0=No	F1.0
68	INDUSTRY	if OWNRSHP=1	Shipper/Industry Ownership 1=Yes 0=No	F1.0
69	GOVT	if OWNRSHP=2	Governmental Ownership 1=Yes 0=No	F1.0

Card # 8 of 8

Columns	Variable	Transformation Used	Description	Code
1-3	ID		RR IDENT #	001-148 F3.0
4			CARD #	"8"
6-10	OPR	from OPRATIO	=1 if OPRATIO<70 =2 if 70≤OPRATIO <100 =3 if OPRATIO≥100	F5.0 MV=99999.
11-15	TRAK	from TRAKMAIN	=1 if TRAKMAIN<10 =2 if 10≤TRAKMAIN <20 =3 if TRAKMAIN≥20	F5.0 MV=99999.
16-20	REV	from GROSSREV	=1 if GROSSREV≤100 =2 if 100<GROSSREV ≤250 =3 if GROSSREV>250	F5.0 MV=99999.
21-25	PRD	from COMM1	=0 if 01<COMM1≤09 =1 if 10≤COMM1≤19 =2 if 20≤COMM1≤29 =3 if 30≤COMM1≤39 =4 if 40≤COMM1≤47	F5.0 MV=99999.
26-30	TRAK1	if TRAKMAIN<10	Main Track Mileage <10 1=Yes 0=No	F5.0 MV=99999.
31-35	TRAK2	if TRAKMAIN≥10	Main Track Mileage ≥10 1=Yes 0=No	F5.0
36-40	PRODO	If PRD=0	Highest Tonnage Commodity Code 01-09 1=Yes 0=No	F5.0 MV=99999.

(Continued)

Columns	Variable	Transformation Used	Description	Code
41-45	PROD1	if PRD=1	Highest Tonnage Commodity Code 10-19 1=Yes 0=No	F5.0 MV=99999.
46-50	PROD2	if PRD=2	Highest Tonnage Commodity Code 20-29 1=Yes 0=No	F5.0 MV=99999.
51-55	PROD3	If PRD=3	Highest Tonnage Commodity Code 30-39 1=Yes 0=No	F5.0 MV=99999.
56-60	PROD4	If PRD=4	Highest Tonnage Commodity Code 40-47 1=Yes 0=No	F5.0 MV=99999.
61-65	LOCMILES	MLSLOCRS + MLSLOCTS + MLSLOCYS	Total Locomotive Unit-Miles	F5.0 MV=99999.
66-72	LOCPCTSW	(MLSLOCTS + MLSLOCYS)/ LOCMILES	Percent of Locomotive Unit-Miles for a Switching Service	F7.2 MV=99999.

APPENDIX 7

SUMMARY OF VARIABLES

ICC DATA CLASS II RAILROADS

DOCUMENTATION FOR SPSS FILE 'RAIL4 '

LIST OF THE 1 SUBFILES COMPRISING THE FILE

RAIL4 N= 148

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4 '

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
1	SEQNUM		NONE	0
2	SUBFILE		NONE	A
3	CASWGT		NONE	4
4	ID	RAILROAD IDENTIFICATION NUMBER	999.	0

1. ABRDEEN ROCKFISH
2. ALEXANDR
3. AW+W
4. ALMANOR
5. AMADOR CENTRAL
6. APACHE
7. APALACHI NRTHERN
8. ARCATA+ MAD RVR
9. ARK+LA MISSOURI
10. AD+N
11. ATL+SNT ANDRW BY
12. ATL+WSTN
13. AUGUSTA
14. B+H
15. BAUXITE+NRTHRN
16. BEECH MT
17. BELFONTE CNTRL
18. BELFAST+MOOSEH
19. BELTON
20. BUTT ANA+PACIFIC
21. BUFF CRK+GAULEY
22. CADIZ
23. CAMBRIA+INDIANA
24. CAMINO PLACRVL
25. CPE FEAR
26. CEDR RAP+IWA CTY
27. CHATAHOO INDUS
28. CHATAHOO VALLEY
29. CHESTNUT RIDGE
30. CHI+ILL MIDLAND
31. CITY OF PRINVLLE

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
4	ID	CONT		

32. CLARMONT+CONCORD
33. CLARNDON+PITSFRD
34. CLIFSIDE
35. COLO+WYO
36. CNDN KNZ+SOU
37. CORINTH +COUNCE
38. COTN PLT FARGO
39. DANSVLLE+MT MORS
40. DRDNELLE+RUSLVLE
41. DELTA VY + SOU
42. DEQUEEN +EASTERN
43. DULUTH + NE
44. DURHAM + SOU
45. E CAMDEN+HIGHLND
46. ET+WNC
47. E WASH
48. ELDORDO +WESSON
49. ESCANABA+LK SUPR
50. EVERETT
51. FERDNAND
52. FOND JNS+GLVRSVL
53. F+C
54. GRDN CIT WESTRN
55. GENESSEE+WYO
56. GRAFTON +UPTON
57. GRAY NSH+ASHDOWN
58. GT WEST
59. GREENVL +NORTHRN
60. HAMPTON+BRANCHVL
61. HARTFORD+SLOCOMB
62. HARTWELL
63. HILLSBOR +NE
64. HOLLIS+E
65. KANAWHA CENT
66. KLYS CRK +NW
67. K+T
68. KLAMATH NE
69. LEF+C
70. L+C
71. LASALLE+BUR CTY
72. LAURNBRG+SOU
73. LNGV PRO +NOR
74. LOUISVLL +WADLEY

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
4	ID	CONT		

75. LNA+C
76. LOWVILLE+BVR RVR
77. LUDINGTN+NORTHRN
78. MAGMA AZ
79. MARINETE TOM+W
80. MD+PA
81. MCLD RIV
82. MERIDIAN+BIGBEE
83. MIDDLTWN+NJ
84. MINN DAK+WESTRN
85. MISSIPAN
86. MISS+SKN VY
87. MOBL+GLF
88. MOD+EMPR TRAC
89. MONTPELR+BARRE
90. MOSH VLY
91. NEV NOR
92. NY SUSQ +WSTRN
93. NHAMPTON+BATH
94. N LOUISN +GULF
95. NORWOOD+ST LAWR
96. OREG CAL+EASTRN
97. OREG+NW
98. PERL RVR VY
99. PECOS VY SOU
100. PICKENS
101. PITSBURG+SHAWMUT
102. PT CMFRT + NO
103. PORT HUR + DET
104. PRESCOTT + NW
105. PROV+WOR
106. QUINCY
107. RHWY VAL
108. ROCKDALE SAND+SO
109. ROSCOE SNYD+PAC
110. SABINE R +NRTHRN
111. SLT LAKE +GRFLD
112. SNDRSVLE
113. SAND SPRINGS
114. SAN LUIS CENT
115. SAN MANL ARIZ
116. SNTA MAR VALLEY
117. SKANATLS SHRT LN

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4 '

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
4	ID	CONT		
		118. SO IND		
		119. SO SAN LOUIS V		
		120. ST MARYS		
		121. SUM+CHCT		
		122. TX CEN		
		123. TX+NOR		
		124. TX OK+E		
		125. TX SE		
		126. TOOLE VY		
		127. TRONA		
		128. TLSA SAP UNION		
		129. TWIN BRCH		
		130. UNITY		
		131. UNION TRANS		
		132. UTAH		
		133. VALDOSTA SOUTHRN		
		134. VALLEY+ SILETZ		
		135. VENTURA COUNTY		
		136. VERMONT		
		137. VIRG BLU RIDGE		
		138. VIRG CEN		
		139. WARE SHL		
		140. WARREN+ SALN RV		
		141. WARENTON		
		142. WARWICK		
		143. WAG		
		144. W VA NOR		
		145. WHT SULP SPRNGS		
		146. WINFIELD		
		147. WOLFBORO		
		148. YREKA WS		
5	RDWYMNT	ROADWAY MAINTENANCE $000	10000.	0
6	STRMNT	MAINTAINING STRUCTURES $000	10000.	0
7	TOTMOWS	TOTAL M O W AND STRUCTURES $000	10000.	0
8	LOCOREP	LOCOMOTIVE REPAIRS $000	10000.	0
9	EQUIPREP	CAR AND HWY REV EQUIP REPAIRS $000	10000.	0

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4 '

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
10	EQDEPR	EQUIPMENT DEPRECIATION $000	10000.	0
11	TOTMOE	TOTAL MAINTENANCE OF EQUIPMENT $000	10000.	0
12	TRAFFIC	TRAFFIC EXPENSES $000	10000.	0
13	STASVC	STATION SERVICE $000	10000.	0
14	EMPLOY	YARD AND TRAIN EMPLOYEES $000	10000.	0
15	TOTTRANS	TOTAL TRANSPORTATION RAIL LINE $000	10000.	0
16	ADMIN	ADMINISTRATION $000	10000.	0
17	INS	INSURANCE $000	10000.	0
18	TOTGEN	TOTAL GENERAL EXPENSES $000	10000.	0
19	GRANDTOT	GRAND TOTAL RWY OPER EXPENSES $000	10000.	0
20	OPRATIO	OPERATING RATIO - PERCENT	999.	0
21	REVMISC	TOTAL REVENUE - MISC PHYS PROPTY $000	99999.	0
22	REVNONOP	REVENUES FROM NONOPERATING PROPTY $000	99999.	0
23	PFTNONOP	NET INC OR LOSS NONOPER PROPTY $000	99999.	0
24	TRAKMAIN	MAIN TRACK MILEAGE - MILES	9999.	0
25	TRAKTOT	TOTAL TRACK OPERATED - MILES	9999.	0
26	WTLE59	WEIGHT OF RAIL LT 59 LB PER YD 0. NO 1. YES	9.	0
27	WT60T69	WEIGHT OF RAIL 60-69 LB PER YD 0. NO 1. YES	9.	0
28	WT70T79	WEIGHT OF RAIL 70-79 LB PER YD 0. NO 1. YES	9.	0

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
29	WT80T89	WEIGHT OF RAIL 80-89 LB PER YD 0. NO 1. YES	9.	0
30	WT90T99	WEIGHT OF RAIL 90-99 LB PER YD 0. NO 1. YES	9.	0
31	WTEQ100	WEIGHT OF RAIL EQ 100 LB PER YD 0. NO 1. YES	9.	0
32	WTGT100	WEIGHT OF RAIL GT 100 LB PER YD 0. NO 1. YES	9.	0
33	TIESMILE	NUMBER OF CROSSTIES PER MILE	9999.	0
34	TIESREPL	NUMBER OF CROSSTIES REPLACED IN 1974	99999.	0
35	EXECEMP	AVG NUMBER EMPLOYEES - EXEC-OFFS-ASSTS	99.	0
36	EXECHRS	TOTAL SVC HOURS - EXEC-OFFS-ASSTS 000	100000.	0
37	EXECCMP	TOT COMPENSATION - EXEC-OFFS-ASTS $000	100000.	0
38	NONOPEMP	AVG NUMBER EMPLOYEES - TOT NONOPERATING	999.	0
39	NONOPHRS	TOTAL SVC HOURS - TOT NONOPERATING 000	100000.	0
40	NONOPCMP	TOT COMPENSATION - TOT NONOPERATNG $000	100000.	0
41	OPEREMP	AVG NUMBER EMPLOYEES - TRAIN AND ENG	999.	0
42	OPERHRS	TOTAL SVC HOURS - TRAIN AND ENGINE 000	100000.	0
43	OPERCMP	TOT COMPENSATION - TRAIN AND ENG $000	100000.	0
44	DSLONLY	DIESEL IS ONLY FUEL USED FOR LOCOMOTVS 0. NO 1. YES	9.	0
45	DSLGALS	GALS DIESEL OIL USED BY LOCOMOTVS 000	100000.	0

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
46	MLSTRAIN	TOTAL TRAIN MILES 000	1000.	0
47	MLSLOCRS	LOCOMTV UNIT-MLS ROAD SERVICE 000	1000.	0
48	MLSLOCTS	LOCOMTV UNIT-MLS TRAIN SWITCHING 000	1000.	0
49	MLSLOCYS	LOCOMTV UNIT-MLS YARD SWITCHING 000	1000.	0
50	CRMLSLOD	CAR-MILES LOADED 000	10000.	0
51	CRMLSEMP	CAR-MILES EMPTY 000	10000.	0
52	CRMLSTOT	CAR-MILES TOTAL 000	10000.	0
53	TONSREV	TOTAL TONS REV FREIGHT 000	9999.	0
54	TONSTOT	TOTAL TONS REV-NONREV FREIGHT 000	9999.	0
55	TNMLSREV	TON-MILES REV FREIGHT 000	999999.	0
56	TNMLSTOT	TON-MILES REV-NONREV FREIGHT 000	999999.	0
57	COMM1	COMMODITY CODE HIGHEST TONNAGE 1. FARM PDS 8. FOREST PRDCTS 9. FRSH FSH+MARINE 10. METALLIC ORES 11. COAL 13. CRVD PET,NG,ETC 14. NONMTALC MINS 19. ORDNANCE +ACCS 20. FOOD AND KINDRED 21. TOBACCO PRODUCTS 22. TXTL MIL PRODS 23. APPAREL+FIN TEXT 24. LUMBER+ WOOD 25. FURNIT+ FIXTURES 26. PULP,PAP+ALLIED 27. PRINTED MATTER 28. CHEMICLS+ALLIED 29. PETROLEM+COAL 30. RUBBER+ MISC 31. LEATHER+LTR PDS 32. STN,CLAY,GLS+CNC	99.	0

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4 '

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
57	COMM1	CONT		
		33. PRIM MTL PRODS		
		34. FABR MTL		
		35. MACHINRY EX ELEC		
		36. ELECTRCL MACHY		
		37. TRNSPORT EQUIP		
		38. INSTRMTS ETC		
		39. MISC MFG PRODCTS		
		40. WASTE + SCRAP		
		41. MISC FRT		
		42. SHPG CTS RET EMT		
		44. FRT FWDR TRAFFIC		
		45. SHP ASSN OR SIM		
		46. MISC MIX		
		47. SML PACK		
58	TONS1	TONS - HIGHEST COMMODITY 000	9999.	0
59	REV1	REV - HIGHEST COMMODITY $000	9999.	0
60	COMM2	COMMODITY CODE 2ND HIGHEST TONNAGE	99.	0
		1. FARM PDS		
		8. FOREST PRDCTS		
		9. FRSH FSH+MARINE		
		10. METALLIC ORES		
		11. COAL		
		13. CRVD PET,NG,ETC		
		14. NONMTALC MINS		
		19. ORDNANCE +ACCS		
		20. FOOD AND KINDRED		
		21. TOBACCO PRODUCTS		
		22. TXTL MIL PRODS		
		23. APPAREL+FIN TEXT		
		24. LUMBER+ WOOD		
		25. FURNIT+ FIXTURES		
		26. PULP,PAP+ALLIED		
		27. PRINTED MATTER		
		28. CHEMICLS+ALLIED		
		29. PETROLEM+COAL		
		30. RUBBER+ MISC		
		31. LEATHER+LTR PDS		
		32. STN,CLAY,GLS+CNC		
		33. PRIM MTL PRODS		
		34. FABR MTL		

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4 '

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
60	COMM2	CONT 35. MACHINRY EX ELEC 36. ELECTRCL MACHY 37. TRNSPORT EQUIP 38. INSTRMTS ETC 39. MISC MFG PRODCTS 40. WASTE + SCRAP 41. MISC FRT 42. SHPG CTS RET EMT 44. FRT FWDR TRAFFIC 45. SHP ASSN OR SIM 46. MISC MIX 47. SML PACK		
61	TONS2	TONS - 2ND HIGHEST COMMODITY 000	9999.	0
62	REV2	REV - 2ND HIGHEST COMMODITY $000	9999.	0
63	COMM3	COMMODITY CODE 3RD HIGHEST TONNAGE 1. FARM PDS 8. FOREST PRDCTS 9. FRSH FSH+MARINE 10. METALLIC ORES 11. COAL 13. CRVD PET,NG,ETC 14. NONMTALC MINS 19. ORDNANCE +ACCS 20. FOOD AND KINDRED 21. TOBACCO PRODUCTS 22. TXTL MIL PRODS 23. APPAREL+FIN TEXT 24. LUMBER+ WOOD 25. FURNIT+ FIXTURES 26. PULP,PAP+ALLIED 27. PRINTED MATTER 28. CHEMICLS+ALLIED 29. PETROLEM+COAL 30. RUBBER+ MISC 31. LEATHER+LTR PDS 32. STN,CLAY,GLS+CNC 33. PRIM MTL PRODS 34. FABR MTL 35. MACHINRY EX ELEC 36. ELECTRCL MACHY	99.	0

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
63	COMM3	CONT		
		37. TRNSPORT EQUIP		
		38. INSTRMTS ETC		
		39. MISC MFG PRODCTS		
		40. WASTE + SCRAP		
		41. MISC FRT		
		42. SHPG CTS RET EMT		
		44. FRT FWDR TRAFFIC		
		45. SHP ASSN OR SIM		
		46. MISC MIX		
		47. SML PACK		
64	TONS3	TONS - 3RD HIGHEST COMMODITY 000	9999.	0
65	REV3	REV - 3RD HIGHEST COMMODITY $000	9999.	0
66	COMM4	COMMODITY CODE 4TH HIGHEST TONNAGE	99.	0
		1. FARM PDS		
		8. FOREST PRDCTS		
		9. FRSH FSH+MARINE		
		10. METALLIC ORES		
		11. COAL		
		13. CRVD PET,NG,ETC		
		14. NONMTALC MINS		
		19. ORDNANCE +ACCS		
		20. FOOD AND KINDRED		
		21. TOBACCO PRODUCTS		
		22. TXTL MIL PRODS		
		23. APPAREL+FIN TEXT		
		24. LUMBER+ WOOD		
		25. FURNIT+ FIXTURES		
		26. PULP,PAP+ALLIED		
		27. PRINTED MATTER		
		28. CHEMICLS+ALLIED		
		29. PETROLEM+COAL		
		30. RUBBER+ MISC		
		31. LEATHER+LTR PDS		
		32. STN,CLAY,GLS+CNC		
		33. PRIM MTL PRODS		
		34. FABR MTL		
		35. MACHINRY EX ELEC		
		36. ELECTRCL MACHY		
		37. TRNSPORT EQUIP		
		38. INSTRMTS ETC		

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
66	COMM4	CONT 39. MISC MFG PRODCTS 40. WASTE + SCRAP 41. MISC FRT 42. SHPG CTS RET EMT 44. FRT FWDR TRAFFIC 45. SHP ASSN OR SIM 46. MISC MIX 47. SML PACK		
67	TONS4	TONS - 4TH HIGHEST COMMODITY 000	9999.	0
68	REV4	REV - 4TH HIGHEST COMMODITY $000	9999.	0
69	COMM5	COMMODITY CODE 5TH HIGHEST TONNAGE 1. FARM PDS 8. FOREST PRDCTS 9. FRSH FSH+MARINE 10. METALLIC ORES 11. COAL 13. CRVD PET,NG,ETC 14. NONMTALC MINS 19. ORDNANCE +ACCS 20. FOOD AND KINDRED 21. TOBACCO PRODUCTS 22. TXTL MIL PRODS 23. APPAREL+FIN TEXT 24. LUMBER+ WOOD 25. FURNIT+ FIXTURES 26. PULP,PAP+ALLIED 27. PRINTED MATTER 28. CHEMICLS+ALLIED 29. PETROLEM+COAL 30. RUBBER+ MISC 31. LEATHER+LTR PDS 32. STN,CLAY,GLS+CNC 33. PRIM MTL PRODS 34. FABR MTL 35. MACHINRY EX ELEC 36. ELECTRCL MACHY 37. TRNSPORT EQUIP 38. INSTRMTS ETC 39. MISC MFG PRODCTS 40. WASTE + SCRAP	99.	0

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4 '

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
69	COMM5	CONT 41. MISC FRT 42. SHPG CTS RET EMT 44. FRT FWDR TRAFFIC 45. SHP ASSN OR SIM 46. MISC MIX 47. SML PACK		
70	TONS5	TONS - 5TH HIGHEST COMMODITY 000	9999.	0
71	REV5	REV - 5TH HIGHEST COMMODITY $000	9999.	0
72	TONSORIG	TOTAL TONS REV FREIGHT ORIGINATED 000	9999.	0
73	TONSRECD	TOTAL TONS REV FREIGHT RECEIVED 000	9999.	0
74	TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	9999.	0
75	GROSSREV	GROSS FREIGHT REVENUE $000	9999.	0
76	PCTMOWS	TOTMOWS AS A PERCENTAGE OF GRANDTOT	10000.	0
77	PCTMOE	TOTMOE AS A PERCENTAGE OF GRANDTOT	10000.	0
78	PCTTRAF	TRAFFIC AS A PERCENTAGE OF GRANDTOT	10000.	0
79	PCTTRAN	TOTTRANNS AS A PERCENTAGE OF GRANDTOT	10000.	0
80	PCTEMPL	EMPLOY AS A PERCENTAGE OF GRANDTOT	10000.	0
81	PCTGEN	TOTGEN AS A PERCENT OF GRANDTOT	10000.	0
82	TOTEMP	TOTAL EMPLOYEES	100000.	0
83	TOTHRS	TOTAL SERVICE HOURS 000	100000.	0
84	TOTCMP	TOTAL COMPENSATION $000	100000.	0
85	NUMLOCS	NUMBER OF LOCOMOTIVES	99.	0
86	TOTHP	TOTAL HORSEPOWER ALL LOCOMOTIVES	99999.	0
87	STATE	STATE	NONE	A

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4 '

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
88	TERRTY	TERRITORY 1. EASTERN 2. SOUTHERN 3. WESTERN	NONE	0
89	NUMCONNS	NUMBER OF CONNECTING CARRIERS	NONE	0
90	OWNRSHP	OWNERSHIP TYPE 1. SHIPPER 2. GOVT 3. OTHER 0. INDEP	NONE	0
91	XTOTMOWS	TOTMOWS IN $000 PER MILE	99999.	0
92	XTOTMOE	TOTMOE IN $000 PER MILE	99999.	0
93	XTRAFFIC	TRAFFIC IN $000 PER MILE	99999.	0
94	XTOTRANS	TOTTRANS IN $000 PER MILE	99999.	0
95	XTOTGEN	TOTGEN IN $000 PER MILE	99999.	0
96	XGRNDTOT	GRANDTOT IN $000 PER MILE	99999.	0
97	XTIESREP	NUMBER OF TIES REPLACED PER MILE	99999.	0
98	XEXECEMP	NUMBER OF EXEC-OFFS-ASSTS PER MILE	99999.	0
99	XNONOPEM	TOTAL NONOPERATING EMPLOYEES PER MILE	99999.	0
100	XOPEREMP	TRAIN AND ENGINE EMPLOYEES PER MILE	99999.	0
101	XTOTEMP	TOTAL NUMBER OF EMPLOYEES PER MILE	99999.	0
102	XTOTHRS	TOTAL HRS OF SVC IN 000 PER MILE	99999.	0
103	XTOTCMP	TOTAL COMPENSATION IN $000 PER MILE	99999.	0
104	XMLSTRAN	TOTAL TRAIN MILES IN 000 PER MILE	99999.	0
105	XCRMLTOT	TOTAL CAR MILES IN 000 PER MILE	99999.	0

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
106	XTONSTOT	TOT TONS REV-NONREV FRT IN 000 PER MILE	99999.	0
107	XTNMLTOT	TON-MILES REV-NONREV FRT IN 000 PER MILE	99999.	0
108	XTOTNSRV	TOT TONS REVENUE FREIGHT IN 000 PER MILE	99999.	0
109	XGROSREV	GROSS FREIGHT REVENUE IN $000 PER MILE	99999.	0
110	AVWAGOFF	AVG $ WAGE PER HOUR EXEC-OFFS-ASSTS	99999.	0
111	AVWAGNOP	AVG $ WAGE PER HOUR NONOP EMPLOYEES	99999.	0
112	AVWAGOP	AVG $ WAGE PER HOUR TRAIN-ENGINE EMPLYS	99999.	0
113	AVWAGTOT	AVG $ WAGE PER HOUR - ALL EMPLOYEES	99999.	0
114	EASTERN	CARRIER LOCATED IN EASTERN DISTRICT 0. NO 1. YES	NONE	0
115	SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT 0. NO 1. YES	NONE	0
116	WESTERN	CARRIER LOCATED IN WESTERN DISTRICT 0. NO 1. YES	NONE	0
117	INDEP	CARRIER OWNERSHIP - INDEPENDENT 0. NO 1. YES	NONE	0
118	INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY 0. NO 1. YES	NONE	0
119	GOVT	CARRIER OWNERSHIP - GOVERNMENTAL UNIT 0. NO 1. YES	NONE	0
120	OPR	SEGMENTATION BY OPERATING RATIO 1. LT 70 2. GE 70 AND LT 100 3. GE 100	99999.	0

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE •RAIL4

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
120	OPR	CONT		
121	TRAK	SEGMENTATION BY MAIN TRACK MILEAGE 1. LT 10 2. GE 10 AND LT 20 3. GE 20	99999.	0
122	REV	SEGMENTATION BY GROSS FREIGHT REV $000 1. LE 100 2. GT 100 AND LE 250 3. GT 250	99999.	0
123	PRD	HIGHEST TONNAGE COMM TYPE BY STCC CODE 0. 01-09 1. 10-19 2. 20-29 3. 30-39 4. 40-47	99999.	0
124	TRAK1	MAIN TRACK MILEAGE LESS THAN 10 MILES 0. NO 1. YES	99999.	0
125	TRAK2	MAIN TRACK MILEAGE GT OR EQ TO 10 MILES 0. NO 1. YES	99999.	0
126	PROD0	HIGHEST TONNAGE COMM IS STCC CODE 01-09 0. NO 1. YES	99999.	0
127	PROD1	HIGHEST TONNAGE COMM IS STCC CODE 10-19 0. NO 1. YES	99999.	0
128	PROD2	HIGHEST TONNAGE COMM IS STCC CODE 20-29 0. NO 1. YES	99999.	0
129	PROD3	HIGHEST TONNAGE COMM IS STCC CODE 30-39 0. NO 1. YES	99999.	0

DOCUMENTATION FOR THE 132 VARIABLES IN THE FILE 'RAIL4 '

REL POS	VARIABLE NAME	VARIABLE LABEL	MISSING VALUES	PRT FMT
130	PROD4	HIGHEST TONNAGE COMM IS STCC CODE 40-47 0. NO 1. YES	99999.	0
131	LOCMILES	TOTAL LOCOMOTIVE UNIT-MILES 000	99999.	0
132	LOCPCTSW	PCT OF LOCMILES FOR SWITCHING	99999.00	2

APPENDIX 8

FREQUENCY DISTRIBUTIONS AND SUMMARY STATISTICS FOR ALL STUDY VARIABLES

(BASED UPON 1974 DATA
FOR THE 102 CLASS II CARRIERS SELECTED FOR ANALYSIS)

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

ID RAILROAD IDENTIFICATION NUMBER

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	1	1	1	52.	1	1	34	97.	1	1	68
2.	1	1	2	53.	1	1	35	98.	1	1	69
4.	1	1	3	54.	1	1	36	99.	1	1	70
5.	1	1	4	56.	1	1	37	100.	1	1	71
8.	1	1	5	57.	1	1	38	104.	1	1	72
12.	1	1	6	59.	1	1	39	106.	1	1	73
13.	1	1	7	60.	1	1	40	107.	1	1	74
14.	1	1	8	61.	1	1	41	110.	1	1	75
15.	1	1	9	62.	1	1	42	111.	1	1	75
16.	1	1	10	63.	1	1	43	114.	1	1	76
17.	1	1	11	64.	1	1	44	117.	1	1	77
18.	1	1	12	65.	1	1	45	119.	1	1	78
19.	1	1	13	66.	1	1	46	121.	1	1	79
21.	1	1	14	67.	1	1	47	122.	1	1	80
22.	1	1	15	68.	1	1	48	125.	1	1	81
28.	1	1	16	69.	1	1	49	128.	1	1	82
29.	1	1	17	70.	1	1	50	129.	1	1	83
31.	1	1	18	71.	1	1	51	130.	1	1	84
32.	1	1	19	72.	1	1	52	131.	1	1	85
33.	1	1	20	74.	1	1	53	133.	1	1	86
34.	1	1	21	75.	1	1	54	134.	1	1	87
36.	1	1	22	76.	1	1	55	135.	1	1	88
38.	1	1	23	77.	1	1	56	137.	1	1	89
39.	1	1	24	78.	1	1	57	138.	1	1	90
40.	1	1	25	83.	1	1	58	139.	1	1	91
41.	1	1	25	84.	1	1	59	140.	1	1	92
43.	1	1	26	85.	1	1	60	141.	1	1	93
45.	1	1	27	86.	1	1	61	142.	1	1	94
46.	1	1	28	87.	1	1	62	143.	1	1	95
47.	1	1	29	88.	1	1	63	144.	1	1	96
48.	1	1	30	89.	1	1	64	145.	1	1	97
49.	1	1	31	90.	1	1	65	146.	1	1	98
50.	1	1	32	93.	1	1	66	147.	1	1	99
51.	1	1	33	95.	1	1	67	148.	1	1	100

MEAN	75.255	STD ERR	4.247	MEDIAN	70.500
MODE	1.000	STD DEV	42.893	VARIANCE	1839.769
KURTOSIS	-1.131	SKEWNESS	0.108	RANGE	147.000
MINIMUM	1.000	MAXIMUM	148.000		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

RDWYMNT ROADWAY MAINTENANCE $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	3	3	3	23.	1	1	37	61.	1	1	70
0.	1	1	4	25.	1	1	38	62.	1	1	71
1.	1	1	5	25.	1	1	39	62.	1	1	72
1.	1	1	6	25.	1	1	40	63.	1	1	73
2.	1	1	7	25.	1	1	41	65.	1	1	74
3.	1	1	8	27.	1	1	42	65.	1	1	75
4.	1	1	9	27.	1	1	43	69.	1	1	75
4.	1	1	10	31.	1	1	44	70.	1	1	76
4.	1	1	11	32.	1	1	45	71.	1	1	77
5.	1	1	12	33.	1	1	46	73.	1	1	78
6.	1	1	13	35.	1	1	47	73.	1	1	79
7.	1	1	14	37.	1	1	48	74.	1	1	80
7.	1	1	15	37.	1	1	49	74.	1	1	81
7.	1	1	16	38.	1	1	50	78.	1	1	82
8.	1	1	17	38.	1	1	51	78.	1	1	83
8.	1	1	18	38.	1	1	52	80.	1	1	84
11.	1	1	19	39.	1	1	53	81.	1	1	85
12.	1	1	20	41.	1	1	54	83.	1	1	86
12.	1	1	21	41.	1	1	55	83.	1	1	87
14.	1	1	22	44.	1	1	56	88.	1	1	88
14.	1	1	23	45.	1	1	57	91.	1	1	89
14.	1	1	24	46.	1	1	58	91.	1	1	90
15.	1	1	25	47.	1	1	59	94.	1	1	91
15.	1	1	25	48.	1	1	60	109.	1	1	92
16.	1	1	26	50.	1	1	61	111.	1	1	93
17.	1	1	27	51.	1	1	62	113.	1	1	94
17.	1	1	28	51.	1	1	63	124.	1	1	95
18.	2	2	30	52.	1	1	64	148.	1	1	96
18.	1	1	31	53.	1	1	65	175.	1	1	97
20.	1	1	32	55.	1	1	66	197.	1	1	98
21.	1	1	33	57.	1	1	67	205.	1	1	99
21.	2	2	35	58.	1	1	68	283.	1	1	100
22.	1	1	36	59.	1	1	69				

MEAN	48.106	STD ERR	4.671	MEDIAN	37.550
MODE	0.0	STD DEV	47.178	VARIANCE	2225.767
KURTOSIS	6.328	SKEWNESS	2.127	RANGE	282.500
MINIMUM	0.0	MAXIMUM	282.500		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

STRMNT MAINTAINING STRUCTURES $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	38	37	37	2.	1	1	72	5.	1	1	87
0.	4	4	41	2.	1	1	73	6.	1	1	88
0.	5	5	46	2.	1	1	74	6.	1	1	89
0.	3	3	49	2.	1	1	75	7.	1	1	90
0.	2	2	51	2.	1	1	75	8.	1	1	91
1.	5	5	56	3.	1	1	76	8.	1	1	92
1.	3	3	59	3.	1	1	77	9.	1	1	93
1.	2	2	61	3.	1	1	78	9.	1	1	94
1.	2	2	63	3.	1	1	79	10.	1	1	95
1.	2	2	65	3.	1	1	80	11.	1	1	96
1.	1	1	66	3.	2	2	82	14.	1	1	97
1.	1	1	67	4.	1	1	83	20.	1	1	98
1.	1	1	68	4.	1	1	84	21.	1	1	99
2.	2	2	70	4.	1	1	85	33.	1	1	100
2.	1	1	71	4.	1	1	86				

MEAN	2.289	STD ERR	0.481	MEDIAN	0.400
MODE	0.0	STD DEV	4.863	VARIANCE	23.646
KURTOSIS	16.988	SKEWNESS	3.773	RANGE	32.900
MINIMUM	0.0	MAXIMUM	32.900		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TOTMOWS TOTAL M O W AND STRUCTURES $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	32.	1	1	34	79.	1	1	68
1.	1	1	2	33.	1	1	35	79.	1	1	69
1.	1	1	3	34.	1	1	36	81.	1	1	70
2.	1	1	4	34.	1	1	37	88.	1	1	71
4.	1	1	5	36.	1	1	38	90.	1	1	72
4.	1	1	6	37.	1	1	39	97.	1	1	73
5.	1	1	7	37.	1	1	40	99.	2	2	75
6.	1	1	8	39.	1	1	41	99.	1	1	75
6.	1	1	9	40.	1	1	42	100.	1	1	76
6.	1	1	10	40.	1	1	43	100.	1	1	77
7.	1	1	11	40.	1	1	44	101.	1	1	78
9.	1	1	12	45.	1	1	45	105.	1	1	79
10.	1	1	13	47.	1	1	46	106.	1	1	80
13.	1	1	14	48.	1	1	47	106.	1	1	81
14.	1	1	15	48.	1	1	48	106.	1	1	82
14.	1	1	16	52.	1	1	49	108.	1	1	83
14.	1	1	17	53.	1	1	50	110.	1	1	84
15.	1	1	18	54.	1	1	51	112.	1	1	85
16.	1	1	19	54.	1	1	52	128.	1	1	86
16.	1	1	20	57.	1	1	53	133.	1	1	87
18.	1	1	21	58.	1	1	54	135.	1	1	88
21.	1	1	22	60.	1	1	55	136.	1	1	89
21.	1	1	23	62.	1	1	56	137.	1	1	90
22.	1	1	24	64.	1	1	57	150.	2	2	92
23.	1	1	25	65.	1	1	58	163.	1	1	93
24.	1	1	25	66.	1	1	59	165.	1	1	94
25.	1	1	26	68.	1	1	60	190.	1	1	95
25.	1	1	27	68.	1	1	61	201.	1	1	96
25.	1	1	28	69.	1	1	62	209.	1	1	97
27.	1	1	29	70.	1	1	63	218.	1	1	98
27.	1	1	30	72.	1	1	64	289.	1	1	99
27.	1	1	31	73.	1	1	65	341.	1	1	100
29.	1	1	32	74.	1	1	66				
29.	1	1	33	76.	1	1	67				

MEAN	67.803	STD ERR	6.104	MEDIAN	52.850
MODE	99.000	STD DEV	61.651	VARIANCE	3800.894
KURTOSIS	3.947	SKEWNESS	1.722	RANGE	341.000
MINIMUM	0.0	MAXIMUM	341.000		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

LOCOREP LOCOMOTIVE REPAIRS $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	8	8	8	5.	1	1	47	19.	1	1	75
0.	4	4	12	5.	2	2	49	19.	1	1	76
0.	1	1	13	5.	1	1	50	19.	1	1	77
0.	3	3	16	5.	1	1	51	20.	2	2	79
1.	2	2	18	6.	1	1	52	20.	1	1	80
1.	3	3	21	6.	1	1	53	20.	1	1	81
1.	1	1	22	7.	1	1	54	21.	1	1	82
1.	1	1	23	8.	2	2	56	23.	1	1	83
1.	4	4	26	8.	1	1	57	24.	1	1	84
1.	1	1	27	9.	1	1	58	27.	1	1	85
2.	2	2	29	9.	2	2	60	27.	1	1	86
2.	1	1	30	10.	1	1	61	29.	1	1	87
2.	1	1	31	10.	1	1	62	29.	1	1	88
2.	2	2	33	12.	2	2	64	32.	1	1	89
2.	1	1	34	13.	1	1	65	33.	1	1	90
3.	2	2	36	13.	1	1	66	34.	1	1	91
3.	1	1	37	13.	1	1	67	36.	1	1	92
3.	1	1	38	13.	1	1	68	39.	1	1	93
3.	1	1	39	16.	1	1	69	40.	1	1	94
3.	2	2	41	16.	1	1	70	43.	1	1	95
3.	1	1	42	17.	1	1	71	45.	1	1	96
4.	1	1	43	17.	1	1	72	47.	1	1	97
4.	1	1	44	17.	1	1	73	51.	1	1	98
4.	1	1	45	18.	1	1	74	72.	1	1	99
4.	1	1	46	18.	1	1	75	221.	1	1	100

MEAN	13.566	STD ERR	2.469	MEDIAN	5.050
MODE	0.0	STD DEV	24.932	VARIANCE	621.598
KURTOSIS	44.585	SKEWNESS	5.887	RANGE	220.600
MINIMUM	0.0	MAXIMUM	220.600		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

EQUIPREP CAR AND HWY REV EQUIP REPAIRS $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	52	51	51	3.	1	1	75	19.	1	1	88
0.	6	6	57	3.	1	1	76	20.	1	1	89
0.	4	4	61	4.	1	1	77	21.	1	1	90
0.	2	2	63	4.	1	1	78	21.	1	1	91
0.	1	1	64	4.	1	1	79	26.	1	1	92
1.	1	1	65	4.	1	1	80	27.	1	1	93
1.	1	1	66	5.	1	1	81	28.	1	1	94
1.	1	1	67	5.	1	1	82	48.	1	1	95
1.	4	4	71	5.	1	1	83	57.	1	1	96
1.	1	1	72	7.	1	1	84	58.	1	1	97
2.	1	1	73	8.	1	1	85	60.	1	1	98
2.	1	1	74	11.	1	1	86	67.	1	1	99
2.	1	1	75	11.	1	1	87	98.	1	1	100

MEAN	6.276	STD ERR	1.618	MEDIAN	0.048
MODE	0.0	STD DEV	16.343	VARIANCE	267.082
KURTOSIS	12.332	SKEWNESS	3.435	RANGE	98.000
MINIMUM	0.0	MAXIMUM	98.000		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

EQDEPR EQUIPMENT DEPRECIATION $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	12	12	12	4.	1	1	44	9.	1	1	76
0.	3	3	15	4.	2	2	46	10.	1	1	77
0.	1	1	16	5.	1	1	47	10.	1	1	78
0.	2	2	18	5.	3	3	50	10.	1	1	79
1.	1	1	19	5.	2	2	52	11.	1	1	80
1.	2	2	21	5.	2	2	54	12.	1	1	81
1.	1	1	22	6.	1	1	55	13.	1	1	82
1.	1	1	23	6.	1	1	56	14.	2	2	84
1.	2	2	25	6.	2	2	58	15.	1	1	85
2.	1	1	25	6.	1	1	59	16.	1	1	86
2.	2	2	27	6.	2	2	61	17.	1	1	87
2.	2	2	29	7.	1	1	62	18.	1	1	88
2.	1	1	30	7.	1	1	63	19.	1	1	89
2.	1	1	31	7.	1	1	64	20.	1	1	90
2.	1	1	32	7.	2	2	66	21.	1	1	91
2.	1	1	33	7.	1	1	67	22.	1	1	92
3.	1	1	34	7.	1	1	68	26.	1	1	93
3.	2	2	36	8.	1	1	69	32.	1	1	94
3.	1	1	37	8.	2	2	71	33.	1	1	95
3.	1	1	38	8.	1	1	72	39.	1	1	96
3.	1	1	39	9.	1	1	73	40.	1	1	97
3.	1	1	40	9.	1	1	74	46.	1	1	98
4.	1	1	41	9.	1	1	75	51.	1	1	99
4.	2	2	43	9.	1	1	75	82.	1	1	100

MEAN	8.485	STD ERR	1.226	MEDIAN	4.650
MODE	0.0	STD DEV	12.380	VARIANCE	153.272
KURTOSIS	12.857	SKEWNESS	3.186	RANGE	82.400
MINIMUM	0.0	MAXIMUM	82.400		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TOTMOE TOTAL MAINTENANCE OF EQUIPMENT $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	3	3	3	13.	1	1	37	40.	1	1	70
0.	1	1	4	14.	1	1	38	42.	1	1	71
0.	1	1	5	14.	1	1	39	42.	1	1	72
1.	1	1	6	15.	1	1	40	43.	1	1	73
1.	1	1	7	16.	1	1	41	45.	1	1	74
1.	1	1	8	17.	1	1	42	46.	1	1	75
1.	1	1	9	17.	1	1	43	47.	1	1	75
1.	1	1	10	17.	1	1	44	48.	1	1	76
2.	1	1	11	18.	1	1	45	53.	1	1	77
2.	1	1	12	18.	1	1	46	55.	1	1	78
3.	1	1	13	19.	1	1	47	57.	1	1	79
3.	2	2	15	19.	1	1	48	63.	1	1	80
4.	1	1	16	21.	1	1	49	64.	1	1	81
4.	1	1	17	21.	1	1	50	69.	1	1	82
4.	1	1	18	21.	1	1	51	70.	1	1	83
4.	1	1	19	21.	1	1	52	70.	1	1	84
5.	1	1	20	21.	1	1	53	71.	1	1	85
5.	1	1	21	22.	1	1	54	78.	1	1	86
5.	1	1	22	23.	1	1	55	82.	1	1	87
6.	1	1	23	23.	1	1	56	83.	1	1	88
7.	2	2	25	25.	1	1	57	83.	1	1	89
7.	1	1	25	26.	1	1	58	84.	1	1	90
7.	1	1	26	26.	1	1	59	92.	1	1	91
8.	1	1	27	27.	1	1	60	98.	1	1	92
8.	1	1	28	28.	1	1	61	98.	1	1	93
8.	1	1	29	29.	1	1	62	99.	1	1	94
9.	1	1	30	32.	1	1	63	118.	1	1	95
10.	1	1	31	32.	1	1	64	131.	1	1	96
10.	1	1	32	33.	1	1	65	152.	1	1	97
10.	1	1	33	34.	1	1	66	164.	1	1	98
10.	1	1	34	38.	1	1	67	232.	1	1	99
12.	1	1	35	38.	1	1	68	238.	1	1	100
12.	1	1	36	39.	1	1	69				

MEAN	36.363	STD ERR	4.418	MEDIAN	20.750
MODE	0.0	STD DEV	44.625	VARIANCE	1991.360
KURTOSIS	6.461	SKEWNESS	2.324	RANGE	237.500
MINIMUM	0.0	MAXIMUM	237.500		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TRAFFIC TRAFFIC EXPENSES $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	11	11	11	4.	1	1	52	11.	1	1	79
0.	2	2	13	4.	1	1	53	11.	1	1	80
0.	2	2	15	4.	1	1	54	11.	1	1	81
1.	1	1	16	4.	1	1	55	12.	1	1	82
1.	5	5	21	5.	3	3	58	12.	1	1	83
1.	1	1	22	5.	1	1	59	13.	1	1	84
1.	2	2	24	5.	2	2	61	13.	1	1	85
1.	1	1	25	5.	1	1	62	13.	1	1	86
1.	2	2	26	5.	1	1	63	14.	1	1	87
1.	2	2	28	5.	1	1	64	17.	1	1	88
1.	4	4	32	6.	2	2	66	17.	1	1	89
1.	4	4	36	6.	1	1	67	17.	1	1	90
2.	1	1	37	6.	1	1	68	18.	1	1	91
2.	2	2	39	6.	2	2	70	21.	1	1	92
2.	2	2	41	6.	1	1	71	22.	1	1	93
2.	2	2	43	6.	1	1	72	24.	1	1	94
3.	1	1	44	7.	2	2	74	25.	1	1	95
3.	1	1	45	7.	1	1	75	26.	1	1	96
3.	1	1	46	8.	1	1	75	33.	1	1	97
3.	1	1	47	10.	1	1	76	40.	1	1	98
4.	3	3	50	10.	1	1	77	47.	1	1	99
4.	1	1	51	11.	1	1	78	75.	1	1	100

MEAN	7.049	STD ERR	1.075	MEDIAN	3.550
MODE	0.0	STD DEV	10.855	VARIANCE	117.825
KURTOSIS	15.066	SKEWNESS	3.408	RANGE	74.500
MINIMUM	0.0	MAXIMUM	74.500		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

STASVC STATION SERVICE $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	20	20	20	7.	1	1	48	19.	1	1	75
0.	1	1	21	7.	1	1	49	19.	1	1	76
1.	2	2	23	8.	1	1	50	19.	1	1	77
1.	1	1	24	8.	1	1	51	19.	2	2	79
1.	1	1	25	8.	2	2	53	20.	1	1	80
1.	1	1	25	8.	1	1	54	21.	1	1	81
1.	1	1	26	9.	1	1	55	21.	1	1	82
2.	1	1	27	9.	1	1	56	21.	1	1	83
2.	1	1	28	12.	1	1	57	22.	1	1	84
2.	1	1	29	12.	1	1	58	25.	1	1	85
2.	1	1	30	13.	1	1	59	25.	1	1	86
3.	1	1	31	13.	1	1	60	27.	1	1	87
3.	2	2	33	14.	1	1	61	28.	1	1	88
3.	2	2	35	14.	1	1	62	28.	1	1	89
3.	1	1	36	14.	1	1	63	31.	1	1	90
3.	1	1	37	15.	1	1	64	34.	1	1	91
4.	1	1	38	15.	1	1	65	34.	1	1	92
4.	1	1	39	15.	1	1	66	43.	1	1	93
4.	2	2	41	16.	2	2	68	46.	1	1	94
5.	1	1	42	16.	1	1	69	60.	1	1	95
5.	1	1	43	17.	1	1	70	63.	1	1	96
6.	1	1	44	17.	1	1	71	69.	1	1	97
6.	1	1	45	17.	2	2	73	74.	1	1	98
6.	1	1	46	17.	1	1	74	75.	1	1	99
6.	1	1	47	18.	1	1	75	133.	1	1	100

MEAN	14.072	STD ERR	1.993	MEDIAN	7.550
MODE	0.0	STD DEV	20.129	VARIANCE	405.181
KURTOSIS	11.974	SKEWNESS	3.018	RANGE	132.800
MINIMUM	0.0	MAXIMUM	132.800		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

EMPLOY YARD AND TRAIN EMPLOYEES $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	13.	1	1	35	39.	1	1	69
1.	1	1	3	14.	1	1	36	39.	1	1	70
1.	1	1	4	15.	1	1	37	40.	1	1	71
1.	1	1	5	16.	1	1	38	42.	2	2	73
2.	1	1	6	18.	1	1	39	46.	1	1	74
3.	1	1	7	18.	1	1	40	46.	1	1	75
3.	1	1	8	19.	1	1	41	48.	1	1	75
4.	1	1	9	20.	1	1	42	49.	1	1	76
5.	1	1	10	21.	1	1	43	51.	2	2	78
5.	1	1	11	22.	1	1	44	52.	1	1	79
5.	1	1	12	23.	1	1	45	59.	1	1	80
5.	1	1	13	25.	1	1	46	61.	1	1	81
5.	1	1	14	25.	1	1	47	61.	1	1	82
5.	1	1	15	25.	1	1	48	65.	1	1	83
5.	1	1	16	26.	1	1	49	66.	1	1	84
7.	1	1	17	27.	1	1	50	67.	1	1	85
7.	1	1	18	27.	1	1	51	70.	1	1	86
8.	1	1	19	27.	1	1	52	71.	1	1	87
9.	1	1	20	27.	2	2	54	80.	1	1	88
9.	2	2	22	27.	2	2	56	84.	1	1	89
9.	2	2	24	28.	1	1	57	98.	1	1	90
10.	1	1	25	28.	1	1	58	100.	1	1	91
10.	1	1	25	29.	1	1	59	105.	1	1	92
10.	1	1	26	29.	1	1	60	105.	1	1	93
10.	1	1	27	30.	1	1	61	135.	1	1	94
11.	1	1	28	31.	1	1	62	159.	1	1	95
11.	1	1	29	34.	1	1	63	169.	1	1	96
11.	1	1	30	35.	1	1	64	172.	1	1	97
12.	1	1	31	36.	1	1	65	261.	1	1	98
13.	1	1	32	37.	1	1	66	359.	1	1	99
13.	1	1	33	38.	1	1	67	450.	1	1	100
13.	1	1	34	38.	1	1	68				

MEAN	43.711	STD ERR	6.577	MEDIAN	26.550
MODE	0.0	STD DEV	66.422	VARIANCE	4411.848
KURTOSIS	17.421	SKEWNESS	3.841	RANGE	449.800
MINIMUM	0.0	MAXIMUM	449.800		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TOTTRANS TOTAL TRANSPORTATION RAIL LINE $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	36.	1	1	35	75.	1	1	69
1.	1	1	2	36.	1	1	36	78.	1	1	70
1.	1	1	3	37.	1	1	37	81.	1	1	71
4.	1	1	4	37.	1	1	38	82.	1	1	72
6.	1	1	5	38.	1	1	39	87.	1	1	73
6.	1	1	6	39.	1	1	40	87.	1	1	74
7.	1	1	7	39.	1	1	41	91.	1	1	75
7.	1	1	8	40.	1	1	42	103.	1	1	75
9.	1	1	9	40.	1	1	43	112.	1	1	76
11.	1	1	10	43.	1	1	44	114.	1	1	77
12.	1	1	11	44.	1	1	45	115.	1	1	78
13.	1	1	12	45.	1	1	46	120.	1	1	79
15.	1	1	13	45.	1	1	47	121.	1	1	80
15.	1	1	14	48.	1	1	48	123.	1	1	81
16.	1	1	15	50.	1	1	49	124.	1	1	82
16.	2	2	17	51.	1	1	50	131.	1	1	83
17.	1	1	18	54.	1	1	51	136.	1	1	84
19.	1	1	19	54.	1	1	52	136.	1	1	85
19.	1	1	20	55.	1	1	53	138.	1	1	86
20.	1	1	21	57.	1	1	54	151.	1	1	87
20.	1	1	22	58.	1	1	55	161.	1	1	88
20.	1	1	23	60.	1	1	56	161.	1	1	89
21.	1	1	24	60.	1	1	57	192.	1	1	90
21.	1	1	25	60.	1	1	58	204.	1	1	91
23.	1	1	25	61.	1	1	59	229.	1	1	92
23.	1	1	26	63.	1	1	60	245.	1	1	93
24.	1	1	27	66.	1	1	61	250.	1	1	94
30.	1	1	28	66.	1	1	62	258.	1	1	95
31.	1	1	29	69.	1	1	63	288.	1	1	96
31.	1	1	30	72.	1	1	64	331.	1	1	97
31.	1	1	31	72.	1	1	65	377.	1	1	98
33.	1	1	32	73.	1	1	66	605.	1	1	99
34.	1	1	33	73.	1	1	67	855.	1	1	100
35.	1	1	34	73.	1	1	68				

MEAN	86.086	STD ERR	11.725	MEDIAN	51.150
MODE	16.400	STD DEV	118.417	VARIANCE	14022.492
KURTOSIS	19.049	SKEWNESS	3.868	RANGE	854.700
MINIMUM	0.0	MAXIMUM	854.700		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

ADMIN ADMINISTRATION $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	6	6	6	12.	1	1	43	40.	1	1	73
0.	1	1	7	13.	1	1	44	41.	1	1	74
1.	1	1	8	13.	1	1	45	42.	1	1	75
1.	3	3	11	13.	1	1	46	44.	1	1	75
1.	1	1	12	13.	1	1	47	45.	1	1	76
1.	1	1	13	15.	1	1	48	45.	1	1	77
1.	1	1	14	15.	1	1	49	46.	1	1	78
1.	1	1	15	15.	2	2	51	46.	1	1	79
2.	3	3	18	18.	1	1	52	46.	1	1	80
2.	1	1	19	19.	1	1	53	47.	1	1	81
2.	1	1	20	20.	1	1	54	48.	1	1	82
3.	1	1	21	20.	1	1	55	49.	1	1	83
3.	1	1	22	22.	1	1	56	51.	1	1	84
3.	2	2	24	23.	1	1	57	53.	1	1	85
3.	1	1	25	23.	1	1	58	59.	1	1	86
4.	1	1	25	24.	1	1	59	63.	1	1	87
4.	1	1	26	28.	1	1	60	65.	1	1	88
4.	1	1	27	31.	1	1	61	70.	1	1	89
4.	2	2	29	31.	1	1	62	71.	1	1	90
6.	1	1	30	32.	1	1	63	75.	1	1	91
6.	1	1	31	32.	1	1	64	76.	1	1	92
7.	1	1	32	33.	1	1	65	91.	1	1	93
7.	1	1	33	33.	1	1	66	92.	1	1	94
9.	2	2	35	34.	1	1	67	100.	1	1	95
9.	2	2	37	34.	1	1	68	101.	1	1	96
10.	2	2	39	36.	1	1	69	101.	1	1	97
10.	1	1	40	38.	1	1	70	104.	1	1	98
12.	1	1	41	38.	1	1	71	116.	1	1	99
12.	1	1	42	40.	1	1	72	213.	1	1	100

MEAN	28.748	STD ERR	3.361	MEDIAN	15.400
MODE	0.0	STD DEV	33.941	VARIANCE	1151.965
KURTOSIS	7.439	SKEWNESS	2.220	RANGE	213.300
MINIMUM	0.0	MAXIMUM	213.300		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

INS INSURANCE $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	30	29	29	2.	1	1	71	7.	1	1	87
0.	14	14	43	2.	1	1	72	7.	1	1	88
0.	3	3	46	2.	1	1	73	7.	1	1	89
1.	3	3	49	2.	1	1	74	7.	1	1	90
1.	1	1	50	2.	2	2	75	8.	1	1	91
1.	1	1	51	3.	2	2	77	8.	1	1	92
1.	2	2	53	3.	1	1	78	9.	1	1	93
1.	5	5	58	4.	1	1	79	9.	1	1	94
1.	2	2	60	4.	1	1	80	10.	1	1	95
1.	3	3	63	5.	1	1	81	12.	1	1	96
1.	1	1	64	5.	1	1	82	13.	1	1	97
1.	1	1	65	6.	1	1	83	13.	1	1	98
2.	3	3	68	6.	1	1	84	20.	1	1	99
2.	1	1	69	6.	1	1	85	22.	1	1	100
2.	1	1	70	7.	1	1	86				

MEAN	2.375	STD ERR	0.406	MEDIAN	0.650
MODE	0.0	STD DEV	4.101	VARIANCE	16.814
KURTOSIS	7.498	SKEWNESS	2.583	RANGE	22.200
MINIMUM	0.0	MAXIMUM	22.200		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TOTGEN TOTAL GENERAL EXPENSES $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	17.	1	1	35	53.	1	1	70
0.	1	1	3	17.	1	1	36	54.	1	1	71
1.	1	1	4	18.	1	1	37	55.	2	2	73
1.	1	1	5	18.	1	1	38	56.	1	1	74
2.	1	1	6	19.	1	1	39	57.	1	1	75
2.	1	1	7	19.	1	1	40	58.	1	1	75
2.	2	2	9	20.	2	2	42	58.	1	1	76
3.	1	1	10	20.	1	1	43	59.	2	2	78
4.	1	1	11	22.	1	1	44	59.	1	1	79
4.	1	1	12	22.	1	1	45	61.	1	1	80
4.	1	1	13	24.	2	2	47	69.	1	1	81
5.	2	2	15	24.	1	1	48	71.	1	1	82
6.	1	1	16	25.	1	1	49	74.	1	1	83
6.	1	1	17	27.	1	1	50	75.	1	1	84
7.	1	1	18	28.	1	1	51	75.	1	1	85
8.	1	1	19	28.	1	1	52	78.	1	1	86
8.	1	1	20	28.	1	1	53	78.	1	1	87
9.	1	1	21	33.	1	1	54	80.	1	1	88
10.	1	1	22	33.	1	1	55	84.	1	1	89
11.	1	1	23	34.	1	1	56	91.	1	1	90
11.	1	1	24	34.	1	1	57	94.	1	1	91
12.	1	1	25	36.	1	1	58	96.	1	1	92
12.	1	1	25	39.	1	1	59	97.	1	1	93
13.	1	1	26	42.	1	1	60	102.	1	1	94
13.	1	1	27	43.	1	1	61	109.	1	1	95
14.	1	1	28	43.	1	1	62	127.	1	1	96
14.	1	1	29	44.	2	2	64	127.	1	1	97
15.	1	1	30	47.	1	1	65	129.	1	1	98
15.	1	1	31	48.	1	1	66	129.	1	1	99
15.	1	1	32	51.	1	1	67	288.	1	1	100
15.	1	1	33	51.	1	1	68				
16.	1	1	34	53.	1	1	69				

MEAN	40.278	STD ERR	4.094	MEDIAN	26.550
MODE	0.0	STD DEV	41.349	VARIANCE	1709.750
KURTOSIS	10.953	SKEWNESS	2.531	RANGE	287.700
MINIMUM	0.0	MAXIMUM	287.700		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

GRANDTOT GRAND TOTAL RWY OPER EXPENSES $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	117.	1	1	34	261.	1	1	69
4.	1	1	2	119.	1	1	35	268.	1	1	70
10.	1	1	3	123.	1	1	36	269.	1	1	71
14.	1	1	4	124.	1	1	37	291.	1	1	72
16.	1	1	5	135.	1	1	38	313.	1	1	73
18.	1	1	6	138.	1	1	39	317.	1	1	74
20.	1	1	7	147.	1	1	40	318.	1	1	75
25.	1	1	8	151.	1	1	41	326.	1	1	75
26.	1	1	9	157.	1	1	42	329.	1	1	76
33.	1	1	10	158.	1	1	43	343.	1	1	77
37.	1	1	11	163.	1	1	44	351.	1	1	78
44.	1	1	12	178.	1	1	45	357.	1	1	79
46.	1	1	13	179.	1	1	46	371.	1	1	80
48.	1	1	14	183.	2	2	48	378.	1	1	81
49.	1	1	15	188.	1	1	49	388.	1	1	82
52.	1	1	16	188.	1	1	50	392.	1	1	83
57.	1	1	17	190.	1	1	51	396.	1	1	84
58.	1	1	18	191.	1	1	52	446.	1	1	85
61.	1	1	19	191.	1	1	53	446.	1	1	86
69.	1	1	20	192.	1	1	54	453.	1	1	87
70.	1	1	21	194.	1	1	55	471.	1	1	88
72.	1	1	22	196.	1	1	56	494.	1	1	89
76.	1	1	23	206.	1	1	57	495.	1	1	90
77.	1	1	24	208.	1	1	58	525.	1	1	91
78.	1	1	25	209.	1	1	59	543.	1	1	92
81.	1	1	25	210.	1	1	60	544.	1	1	93
89.	1	1	26	214.	1	1	61	548.	1	1	94
91.	1	1	27	218.	1	1	62	612.	1	1	95
91.	1	1	28	223.	1	1	63	649.	1	1	96
92.	1	1	29	226.	1	1	64	663.	1	1	97
94.	1	1	30	226.	1	1	65	747.	1	1	98
107.	1	1	31	226.	1	1	66	1079.	1	1	99
113.	1	1	32	239.	1	1	67	1518.	1	1	100
116.	1	1	33	241.	1	1	68				

MEAN	237.876	STD ERR	22.596	MEDIAN	188.150
MODE	182.500	STD DEV	228.210	VARIANCE	52079.910
KURTOSIS	9.524	SKEWNESS	2.496	RANGE	1517.700
MINIMUM	0.0	MAXIMUM	1517.700		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

OPRATIO OPERATING RATIO - PERCENT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
35.	2	2	2	66.	1	1	35	99.	1	1	76
38.	1	1	3	67.	4	4	39	102.	1	1	77
39.	1	1	4	68.	1	1	40	103.	2	2	79
42.	1	1	5	69.	2	2	42	105.	1	1	80
43.	1	1	6	70.	2	2	44	108.	1	1	81
44.	2	2	8	71.	2	2	46	109.	1	1	82
46.	1	1	9	73.	2	2	48	110.	1	1	83
47.	2	2	11	74.	3	3	50	117.	1	1	84
48.	1	1	12	75.	2	2	52	125.	1	1	85
49.	1	1	13	76.	2	2	54	126.	1	1	86
50.	2	2	15	80.	1	1	55	130.	1	1	87
51.	1	1	16	81.	2	2	57	133.	2	2	89
52.	2	2	18	82.	1	1	58	136.	1	1	90
53.	1	1	19	83.	2	2	60	143.	1	1	91
54.	1	1	20	84.	1	1	61	144.	1	1	92
55.	2	2	22	85.	2	2	63	157.	1	1	93
56.	1	1	23	86.	2	2	65	173.	1	1	94
58.	1	1	24	87.	1	1	66	181.	1	1	95
60.	1	1	25	90.	3	3	69	273.	1	1	96
61.	2	2	27	94.	1	1	70	278.	1	1	97
62.	1	1	28	95.	1	1	71	285.	1	1	98
63.	4	4	32	96.	1	1	72	293.	1	1	99
64.	1	1	33	97.	2	2	74	315.	1	1	100
65.	1	1	34	98.	1	1	75				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
999.	1				

MEAN	90.010	STD ERR	5.421	MEDIAN	74.333
MODE	63.000	STD DEV	54.483	VARIANCE	2968.364
KURTOSIS	6.470	SKEWNESS	2.474	RANGE	280.000
MINIMUM	35.000	MAXIMUM	315.000		

VALID CASES 101 MISSING CASES 1

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

REVMISC TOTAL REVENUE - MISC PHYS PROPTY $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	100	98	98	1.	1	1	99	131.	1	1	100

MEAN	1.292	STD ERR	1.279	MEDIAN	0.013
MODE	0.0	STD DEV	12.921	VARIANCE	166.947
KURTOSIS	96.010	SKEWNESS	9.900	RANGE	130.500
MINIMUM	0.0	MAXIMUM	130.500		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

REVNONOP REVENUES FROM NONOPERATING PROPTY $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	82	80	80	4.	1	1	88	29.	1	1	95
0.	2	2	82	5.	1	1	89	31.	1	1	96
0.	1	1	83	10.	1	1	90	46.	1	1	97
0.	1	1	84	10.	1	1	91	51.	1	1	98
1.	1	1	85	15.	1	1	92	73.	1	1	99
3.	1	1	86	22.	1	1	93	10000.	1	1	100
4.	1	1	87	24.	1	1	94				

MEAN	101.254	STD ERR	98.012	MEDIAN	0.012
MODE	0.0	STD DEV	989.878	VARIANCE	979857.687
KURTOSIS	96.005	SKEWNESS	9.900	RANGE	9999.898
MINIMUM	0.0	MAXIMUM	9999.898		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PFTNONOP NET INC OR LOSS NONOPER PROPTY $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
-7.	1	1	1	1.	1	1	87	13.	1	1	95
-2.	1	1	2	2.	1	1	88	15.	1	1	96
-0.	1	1	3	2.	1	1	89	20.	1	1	97
-0.	1	1	4	4.	1	1	90	23.	1	1	98
0.	80	78	82	4.	1	1	91	31.	1	1	99
0.	2	2	84	4.	1	1	92	39.	1	1	100
0.	1	1	85	7.	1	1	93				
0.	1	1	86	9.	1	1	94				

MEAN	1.630	STD ERR	0.606	MEDIAN	0.009
MODE	0.0	STD DEV	6.117	VARIANCE	37.421
KURTOSIS	19.155	SKEWNESS	4.235	RANGE	46.000
MINIMUM	-6.600	MAXIMUM	39.400		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TRAKMAIN MAIN TRACK MILEAGE - MILES

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	3	3	3	14.	4	4	64	29.	1	1	89
2.	4	4	7	15.	2	2	66	30.	1	1	90
3.	6	6	13	16.	2	2	68	31.	1	1	91
4.	6	6	19	17.	4	4	72	32.	1	1	92
5.	6	6	25	18.	2	2	74	33.	1	1	93
6.	3	3	28	19.	4	4	78	34.	1	1	94
7.	5	5	33	20.	1	1	79	36.	1	1	95
8.	3	3	36	21.	1	1	80	40.	1	1	96
9.	5	5	41	22.	3	3	83	41.	1	1	97
10.	12	12	53	23.	1	1	84	47.	1	1	98
11.	1	1	54	24.	2	2	86	50.	1	1	99
12.	5	5	59	25.	1	1	87	67.	1	1	100
13.	1	1	60	28.	1	1	88				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	2				

MEAN	14.080	STD ERR	1.180	MEDIAN	10.250
MODE	10.000	STD DEV	11.797	VARIANCE	139.165
KURTOSIS	3.766	SKEWNESS	1.732	RANGE	66.000
MINIMUM	1.000	MAXIMUM	67.000		

VALID CASES 100 MISSING CASES 2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TRAKTOT TOTAL TRACK OPERATED - MILES

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	2	2	2	16.	1	1	55	31.	2	2	85
2.	3	3	5	17.	4	4	59	32.	1	1	86
3.	1	1	6	18.	2	2	61	33.	1	1	87
4.	3	3	9	19.	1	1	62	34.	1	1	88
5.	4	4	13	20.	3	3	65	37.	2	2	90
6.	7	7	20	21.	2	2	67	39.	1	1	91
7.	4	4	24	22.	3	3	70	41.	2	2	93
8.	3	3	27	24.	2	2	72	42.	1	1	94
10.	4	4	31	25.	2	2	74	43.	1	1	95
11.	4	4	35	26.	2	2	76	46.	1	1	96
12.	8	8	43	27.	1	1	77	49.	1	1	97
13.	3	3	46	28.	2	2	79	51.	1	1	98
14.	5	5	50	29.	2	2	81	63.	1	1	99
15.	4	4	54	30.	2	2	83	82.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	1				

MEAN	18.574	STD ERR	1.411	MEDIAN	14.400
MODE	12.000	STD DEV	14.182	VARIANCE	201.126
KURTOSIS	3.312	SKEWNESS	1.543	RANGE	81.000
MINIMUM	1.000	MAXIMUM	82.000		

VALID CASES 101 MISSING CASES 1

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

WTLE59 WEIGHT OF RAIL LT 59 LB PER YD

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	73	82	82	1.	16	18	100				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9.	13				

MEAN	0.180	STD ERR	0.041	MEDIAN	0.110
MODE	0.0	STD DEV	0.386	VARIANCE	0.149
KURTOSIS	0.739	SKEWNESS	1.658	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 89 MISSING CASES 13

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

WT60T69 WEIGHT OF RAIL 60-69 LB PER YD

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	53	60	60	1.	36	40	100				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9.	13				

MEAN	0.404	STD ERR	0.052	MEDIAN	0.340
MODE	0.0	STD DEV	0.494	VARIANCE	0.244
KURTOSIS	-1.861	SKEWNESS	0.387	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 89 MISSING CASES 13

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

WT70T79 WEIGHT OF RAIL 70-79 LB PER YD

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	46	52	52	1.	43	48	100				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9.	13				

MEAN	0.483	STD ERR	0.053	MEDIAN	0.467
MODE	0.0	STD DEV	0.503	VARIANCE	0.253
KURTOSIS	-2.007	SKEWNESS	0.067	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 89 MISSING CASES 13

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

WT80T89 WEIGHT OF RAIL 80-89 LB PER YD

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	37	42	42	1.	52	58	100				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9.	13				

MEAN	0.584	STD ERR	0.053	MEDIAN	0.644
MODE	1.000	STD DEV	0.496	VARIANCE	0.246
KURTOSIS	-1.896	SKEWNESS	-0.340	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 89 MISSING CASES 13

FILE RAIL4 (CREATION DATE = 06/17/76)

WT90T99 WEIGHT OF RAIL 90-99 LB PER YD

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	63	71	71	1.	26	29	100				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
9.	13				

MEAN	0.292	STD ERR	0.048	MEDIAN	0.206
MODE	0.0	STD DEV	0.457	VARIANCE	0.209
KURTOSIS	-1.185	SKEWNESS	0.909	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 89 MISSING CASES 13

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

WTEQ100 WEIGHT OF RAIL EQ 100 LB PER YD

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	71	80	80	1.	18	20	100				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9.	13				

MEAN	0.202	STD ERR	0.043	MEDIAN	0.127
MODE	0.0	STD DEV	0.404	VARIANCE	0.163
KURTOSIS	0.162	SKEWNESS	1.474	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 89 MISSING CASES 13

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

WTGT100 WEIGHT OF RAIL GT 100 LB PER YD

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	76	85	85	1.	13	15	100				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
9.	13				

MEAN	0.146	STD ERR	0.038	MEDIAN	0.086
MODE	0.0	STD DEV	0.355	VARIANCE	0.126
KURTOSIS	1.961	SKEWNESS	1.993	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 89 MISSING CASES 13

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TIESMILE NUMBER OF CROSSTIES PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
2080.	1	1	1	2781.	1	1	38	3127.	1	1	79
2150.	1	1	2	2800.	11	12	50	3142.	1	1	80
2280.	2	2	4	2816.	1	1	51	3150.	1	1	82
2445.	1	1	5	2820.	1	1	52	3158.	1	1	83
2460.	2	2	8	2828.	1	1	53	3161.	1	1	84
2523.	1	1	9	2830.	1	1	54	3168.	1	1	85
2540.	1	1	10	2850.	1	1	55	3187.	1	1	86
2560.	1	1	11	2853.	1	1	57	3200.	2	2	88
2564.	1	1	12	2855.	1	1	58	3240.	1	1	89
2600.	4	4	16	2880.	3	3	61	3250.	1	1	90
2612.	1	1	17	2893.	1	1	62	3300.	1	1	91
2619.	1	1	18	2900.	1	1	63	3335.	1	1	92
2640.	10	11	29	2960.	1	1	64	3349.	1	1	93
2645.	1	1	30	2992.	1	1	65	3500.	2	2	96
2694.	1	1	32	3000.	8	9	74	3520.	2	2	98
2700.	2	2	34	3017.	1	1	75	3600.	1	1	99
2720.	1	1	35	3062.	1	1	76	3960.	1	1	100
2728.	1	1	36	3100.	1	1	77				
2756.	1	1	37	3113.	1	1	78				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	10				

MEAN	2869.489	STD ERR	33.484	MEDIAN	2801.000
MODE	2800.000	STD DEV	321.166	VARIANCE	103147.375
KURTOSIS	0.847	SKEWNESS	0.510	RANGE	1880.000
MINIMUM	2080.000	MAXIMUM	3960.000		

VALID CASES	92	MISSING CASES	10

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TIESREPL NUMBER OF CROSSTIES REPLACED IN 1974

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	8	8	8	537.	1	1	40	1479.	1	1	72
10.	1	1	9	564.	1	1	41	1500.	1	1	73
24.	1	1	11	640.	1	1	42	1546.	1	1	74
30.	1	1	12	641.	1	1	43	1549.	1	1	75
35.	1	1	13	666.	1	1	44	1550.	1	1	76
50.	1	1	14	685.	1	1	45	1624.	1	1	77
60.	1	1	15	698.	1	1	46	1662.	1	1	78
70.	1	1	16	700.	1	1	47	1672.	1	1	79
88.	1	1	17	704.	1	1	48	1680.	1	1	80
89.	1	1	18	711.	1	1	49	1735.	1	1	81
100.	1	1	19	712.	1	1	51	1739.	1	1	82
104.	1	1	20	760.	1	1	52	1840.	1	1	83
132.	1	1	21	800.	1	1	53	2069.	1	1	84
163.	1	1	22	805.	1	1	54	2148.	1	1	85
173.	1	1	23	847.	1	1	55	2341.	1	1	86
178.	1	1	24	894.	1	1	56	2355.	1	1	87
180.	1	1	25	902.	1	1	57	2637.	1	1	88
200.	1	1	26	932.	2	2	59	2751.	1	1	89
230.	1	1	27	950.	1	1	60	2912.	1	1	91
306.	1	1	28	976.	1	1	61	3240.	1	1	92
340.	1	1	29	1005.	1	1	62	3791.	1	1	93
388.	1	1	31	1091.	1	1	63	3906.	1	1	94
400.	2	2	33	1140.	1	1	64	4053.	1	1	95
408.	1	1	34	1156.	1	1	65	4729.	1	1	96
435.	1	1	35	1190.	1	1	66	4806.	1	1	97
442.	1	1	36	1200.	1	1	67	5491.	1	1	98
496.	1	1	37	1304.	1	1	68	7302.	1	1	99
504.	1	1	38	1372.	1	1	69	9049.	1	1	100
535.	1	1	39	1453.	1	1	71				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	7				

MEAN	1228.347	STD ERR	159.547	MEDIAN	712.000
MODE	0.0	STD DEV	1555.073	VARIANCE	2418252.00
KURTOSIS	7.908	SKEWNESS	2.553	RANGE	9049.000
MINIMUM	0.0	MAXIMUM	9049.000		

VALID CASES 95 MISSING CASES 7

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

EXECEMP AVG NUMBER EMPLOYEES - EXEC-OFFS-ASSTS

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	13	14	14	3.	11	12	78	6.	2	2	98
1.	28	30	44	4.	13	14	91	9.	1	1	99
2.	21	22	66	5.	4	4	96	10.	1	1	100

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
99.	8				

MEAN	2.191	STD ERR	0.191	MEDIAN	1.786
MODE	1.000	STD DEV	1.857	VARIANCE	3.447
KURTOSIS	3.368	SKEWNESS	1.494	RANGE	10.000
MINIMUM	0.0	MAXIMUM	10.000		

VALID CASES 94 MISSING CASES 8

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

EXECHRS TOTAL SVC HOURS - EXEC-OFFS-ASSTS 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	14	16	16	2.	1	1	34	5.	1	1	80
0.	1	1	17	2.	16	18	52	5.	1	1	81
0.	1	1	18	2.	2	2	54	6.	1	1	82
0.	1	1	19	3.	2	2	57	6.	1	1	83
1.	4	4	23	3.	1	1	58	6.	1	1	84
1.	2	2	26	4.	1	1	59	6.	3	3	88
1.	2	2	28	4.	5	6	64	8.	7	8	96
1.	1	1	29	4.	9	10	74	9.	1	1	97
2.	1	1	30	4.	2	2	77	11.	1	1	98
2.	1	1	31	4.	1	1	78	12.	1	1	99
2.	2	2	33	5.	1	1	79	20.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
100000.	12				

MEAN	3.347	STD ERR	0.349	MEDIAN	2.137
MODE	2.100	STD DEV	3.312	VARIANCE	10.966
KURTOSIS	5.834	SKEWNESS	1.889	RANGE	20.000
MINIMUM	0.0	MAXIMUM	20.000		

VALID CASES 90 MISSING CASES 12

FILE RAIL4 (CREATION DATE = 06/17/76)

EXECCMP TOT COMPENSATION - EXEC-OFFS-ASTS $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	16	17	17	16.	1	1	46	34.	1	1	73
1.	1	1	18	16.	1	1	47	34.	1	1	74
1.	1	1	20	17.	1	1	48	34.	1	1	75
1.	1	1	21	17.	1	1	49	38.	1	1	76
1.	1	1	22	18.	1	1	50	38.	1	1	77
1.	1	1	23	20.	1	1	51	41.	1	1	78
2.	1	1	24	20.	1	1	52	42.	1	1	79
4.	1	1	25	21.	1	1	53	42.	1	1	80
6.	1	1	26	21.	1	1	54	43.	1	1	82
6.	1	1	27	22.	1	1	55	47.	2	2	84
7.	1	1	28	23.	1	1	57	48.	1	1	85
8.	1	1	29	23.	1	1	58	49.	1	1	86
8.	1	1	30	23.	1	1	59	51.	1	1	87
10.	1	1	32	25.	1	1	60	51.	1	1	88
11.	1	1	33	25.	1	1	61	54.	1	1	89
11.	1	1	34	25.	1	1	62	54.	1	1	90
11.	1	1	35	25.	1	1	63	56.	2	2	92
12.	1	1	36	27.	1	1	64	58.	1	1	93
12.	1	1	37	28.	1	1	65	65.	1	1	95
13.	2	2	39	29.	1	1	66	70.	1	1	96
14.	1	1	40	31.	1	1	67	85.	1	1	97
15.	1	1	41	33.	1	1	68	92.	1	1	98
15.	1	1	42	33.	1	1	70	98.	1	1	99
16.	1	1	43	33.	1	1	71	179.	1	1	100
16.	1	1	45	34.	1	1	72				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
100000.	10				

MEAN	25.255	STD ERR	2.867	MEDIAN	17.850
MODE	0.0	STD DEV	27.501	VARIANCE	756.313
KURTOSIS	9.412	SKEWNESS	2.395	RANGE	179.300
MINIMUM	0.0	MAXIMUM	179.300		

VALID CASES 92 MISSING CASES 10

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

NONOPEMP AVG NUMBER EMPLOYEES - TOT NONOPERATING

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	11.	6	6	59	22.	1	1	89
1.	5	5	6	12.	7	7	66	23.	1	1	90
2.	4	4	10	13.	2	2	68	24.	1	1	91
3.	5	5	15	14.	2	2	70	25.	2	2	93
4.	3	3	19	15.	2	2	72	26.	1	1	94
5.	9	9	28	16.	3	3	75	28.	2	2	96
6.	11	11	39	17.	4	4	79	34.	1	1	97
7.	1	1	40	18.	4	4	84	48.	2	2	99
8.	5	5	45	19.	1	1	85	54.	1	1	100
9.	4	4	49	20.	2	2	87				
10.	3	3	53	21.	1	1	88				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
999.	5				

MEAN	11.866	STD ERR	1.014	MEDIAN	9.667
MODE	6.000	STD DEV	9.984	VARIANCE	99.680
KURTOSIS	4.670	SKEWNESS	1.899	RANGE	54.000
MINIMUM	0.0	MAXIMUM	54.000		

VALID CASES 97 MISSING CASES 5

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

NONOPHRS TOTAL SVC HOURS - TOT NONOPERATING 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	11.	2	2	37	25.	1	1	69
0.	1	1	2	11.	1	1	38	26.	1	1	70
0.	1	1	3	12.	1	1	39	26.	2	2	72
1.	2	2	5	12.	1	1	40	27.	1	1	73
1.	1	1	6	13.	1	1	41	29.	1	1	74
2.	1	1	7	14.	1	1	43	30.	1	1	76
2.	1	1	9	14.	1	1	44	30.	1	1	77
2.	2	2	11	15.	1	1	45	30.	1	1	78
2.	1	1	12	15.	1	1	46	30.	1	1	79
2.	1	1	13	16.	2	2	48	32.	1	1	80
3.	2	2	15	16.	1	1	49	33.	1	1	81
4.	1	1	16	16.	1	1	50	33.	1	1	82
4.	1	1	17	16.	1	1	51	34.	1	1	83
6.	1	1	18	16.	1	1	52	36.	1	1	84
6.	1	1	19	17.	1	1	53	37.	1	1	85
6.	1	1	20	17.	1	1	54	37.	1	1	86
7.	1	1	21	18.	1	1	55	39.	1	1	87
7.	1	1	22	19.	1	1	56	42.	1	1	88
8.	1	1	23	20.	1	1	57	44.	1	1	89
8.	1	1	24	20.	1	1	59	48.	1	1	90
8.	1	1	26	21.	1	1	60	53.	1	1	91
8.	1	1	27	21.	1	1	61	53.	1	1	93
9.	1	1	28	21.	1	1	62	54.	1	1	94
9.	1	1	29	21.	1	1	63	56.	1	1	95
9.	1	1	30	22.	1	1	64	57.	1	1	96
9.	2	2	32	23.	1	1	65	88.	1	1	97
9.	1	1	33	24.	1	1	66	95.	1	1	98
10.	1	1	34	24.	1	1	67	100.	1	1	99
11.	1	1	35	25.	1	1	68	115.	1	1	100

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
100000.	8				

MEAN	21.984	STD ERR	2.247	MEDIAN	16.050
MODE	0.500	STD DEV	21.785	VARIANCE	474.568
KURTOSIS	5.101	SKEWNESS	2.077	RANGE	115.300
MINIMUM	0.0	MAXIMUM	115.300		

VALID CASES 94 MISSING CASES 8

FILE RAIL4 (CREATION DATE = 06/17/76)

NONOPCMP TOT COMPENSATION - TOT NONOPERATNG $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	47.	1	1	35	111.	1	1	70
1.	1	1	3	48.	1	1	36	112.	1	1	71
3.	1	1	4	49.	1	1	37	119.	1	1	72
4.	1	1	5	49.	1	1	38	120.	1	1	73
4.	1	1	6	50.	1	1	39	122.	1	1	74
4.	1	1	7	54.	1	1	40	123.	1	1	75
4.	1	1	8	56.	1	1	41	125.	1	1	76
5.	1	1	9	58.	1	1	42	135.	1	1	77
5.	1	1	10	58.	1	1	43	147.	1	1	78
6.	1	1	11	58.	1	1	44	148.	1	1	79
8.	1	1	12	64.	1	1	45	156.	1	1	80
8.	1	1	13	65.	2	2	47	161.	1	1	81
9.	1	1	14	67.	1	1	48	163.	1	1	82
12.	1	1	15	69.	1	1	49	167.	1	1	84
13.	1	1	16	70.	1	1	51	168.	1	1	85
17.	1	1	18	72.	1	1	52	173.	1	1	86
18.	1	1	19	73.	2	2	54	176.	1	1	87
22.	1	1	20	74.	1	1	55	177.	1	1	88
25.	1	1	21	74.	1	1	56	193.	1	1	89
25.	1	1	22	75.	1	1	57	197.	2	2	91
26.	1	1	23	79.	1	1	58	202.	1	1	92
29.	2	2	25	83.	1	1	59	204.	1	1	93
29.	1	1	26	87.	1	1	60	212.	1	1	94
31.	1	1	27	90.	1	1	61	264.	1	1	95
36.	1	1	28	91.	1	1	62	290.	1	1	96
38.	1	1	29	92.	1	1	63	316.	1	1	97
38.	1	1	30	96.	1	1	64	348.	1	1	98
39.	1	1	31	96.	1	1	65	575.	1	1	99
42.	1	1	32	100.	2	2	67	629.	1	1	100
44.	1	1	33	103.	1	1	68				
47.	1	1	34	103.	1	1	69				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
100000.	5				

MEAN	96.235	STD ERR	10.577	MEDIAN	69.900
MODE	0.0	STD DEV	104.167	VARIANCE	10850.746
KURTOSIS	9.747	SKEWNESS	2.689	RANGE	629.300
MINIMUM	0.0	MAXIMUM	629.300		

VALID CASES 97 MISSING CASES 5

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

OPEREMP AVG NUMBER EMPLOYEES - TRAIN AND ENG

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	5	5	5	6.	6	6	85	12.	1	1	96
1.	8	8	14	7.	2	2	88	13.	1	1	97
2.	19	20	33	8.	1	1	89	21.	1	1	98
3.	24	25	58	9.	2	2	91	31.	2	2	100
4.	14	15	73	10.	3	3	94				
5.	6	6	79	11.	1	1	95				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
999.	6				

MEAN	4.469	STD ERR	0.512	MEDIAN	3.167
MODE	3.000	STD DEV	5.020	VARIANCE	25.199
KURTOSIS	14.968	SKEWNESS	3.565	RANGE	31.000
MINIMUM	0.0	MAXIMUM	31.000		

VALID CASES 96 MISSING CASES 6

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

OPERHRS TOTAL SVC HOURS - TRAIN AND ENGINE 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	3	3	3	6.	1	1	39	13.	2	2	72
0.	1	1	4	6.	1	1	40	13.	1	1	73
0.	1	1	5	7.	1	1	41	13.	1	1	74
1.	1	1	6	7.	2	2	44	14.	1	1	76
1.	1	1	7	7.	1	1	45	14.	1	1	77
1.	1	1	9	7.	1	1	46	15.	1	1	78
1.	1	1	10	7.	1	1	47	16.	1	1	79
1.	1	1	11	8.	2	2	49	16.	1	1	80
1.	1	1	12	8.	1	1	50	17.	1	1	81
2.	1	1	13	8.	1	1	51	20.	1	1	82
2.	3	3	16	8.	1	1	52	21.	1	1	83
2.	1	1	17	9.	1	1	53	23.	2	2	85
2.	1	1	18	9.	1	1	54	24.	1	1	86
2.	1	1	19	9.	3	3	57	25.	1	1	87
3.	3	3	22	9.	1	1	59	25.	1	1	88
3.	2	2	24	9.	1	1	60	26.	1	1	89
4.	1	1	26	10.	1	1	61	28.	1	1	90
4.	1	1	27	10.	1	1	62	29.	1	1	91
4.	1	1	28	11.	1	1	63	50.	1	1	93
5.	1	1	29	11.	1	1	64	51.	1	1	94
5.	2	2	31	11.	1	1	65	63.	1	1	95
5.	1	1	32	11.	1	1	66	65.	1	1	96
5.	1	1	33	12.	1	1	67	69.	1	1	97
6.	2	2	35	12.	1	1	68	76.	1	1	98
6.	2	2	37	12.	1	1	69	78.	1	1	99
6.	1	1	38	13.	1	1	70	113.	1	1	100

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
100000.	8				

MEAN	14.069	STD ERR	1.999	MEDIAN	7.750
MODE	0.0	STD DEV	19.385	VARIANCE	375.797
KURTOSIS	8.713	SKEWNESS	2.848	RANGE	113.400
MINIMUM	0.0	MAXIMUM	113.400		

VALID CASES 94   MISSING CASES 8

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

OPERCMP TOT COMPENSATION - TRAIN AND ENG $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	3	3	3	23.	1	1	40	60.	1	1	72
1.	1	1	4	23.	1	1	41	63.	1	1	73
1.	1	1	5	24.	1	1	42	63.	1	1	74
1.	1	1	6	24.	1	1	43	64.	1	1	75
3.	1	1	7	25.	1	1	44	71.	1	1	76
4.	1	1	8	25.	1	1	45	72.	1	1	77
5.	1	1	9	27.	1	1	46	73.	1	1	78
5.	1	1	10	27.	1	1	47	83.	1	1	79
6.	1	1	11	27.	1	1	48	87.	1	1	80
7.	2	2	14	30.	1	1	49	90.	1	1	81
8.	1	1	15	30.	1	1	50	94.	1	1	82
9.	1	1	16	34.	1	1	51	99.	1	1	83
9.	2	2	18	34.	1	1	52	99.	1	1	84
10.	1	1	19	35.	1	1	53	105.	1	1	85
11.	1	1	20	36.	1	1	54	105.	1	1	86
13.	2	2	22	38.	1	1	55	112.	1	1	88
13.	2	2	24	38.	1	1	56	136.	1	1	89
14.	1	1	25	39.	1	1	57	142.	1	1	90
14.	1	1	26	39.	2	2	59	143.	1	1	91
14.	1	1	27	42.	1	1	60	151.	1	1	92
15.	1	1	28	43.	1	1	61	206.	1	1	93
18.	1	1	29	45.	1	1	63	221.	1	1	94
18.	1	1	30	45.	1	1	64	312.	1	1	95
20.	1	1	31	46.	1	1	65	327.	1	1	96
21.	1	1	32	46.	2	2	67	385.	1	1	97
21.	1	1	33	46.	1	1	68	433.	1	1	98
22.	1	1	34	54.	1	1	69	436.	1	1	99
22.	2	2	36	57.	1	1	70	481.	1	1	100
22.	2	2	39	57.	1	1	71				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
100000.	6				

MEAN	65.270	STD ERR	9.897	MEDIAN	30.450
MODE	0.0	STD DEV	96.972	VARIANCE	9403.625
KURTOSIS	7.393	SKEWNESS	2.766	RANGE	480.900
MINIMUM	0.0	MAXIMUM	480.900		

VALID CASES 96 MISSING CASES 6

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

DSLONLY DIESEL IS ONLY FUEL USED FOR LOCOMOTVS

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	1.	95	98	100				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9.	5				

MEAN	0.979	STD ERR	0.015	MEDIAN	0.989
MODE	1.000	STD DEV	0.143	VARIANCE	0.020
KURTOSIS	43.041	SKEWNESS	-6.712	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 97 MISSING CASES 5

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

DSLGALS GALS DIESEL OIL USED BY LOCOMOTVS 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	9.	1	1	41	31.	1	1	73
1.	1	1	3	9.	1	1	42	32.	1	1	74
1.	1	1	4	9.	1	1	43	32.	1	1	75
1.	1	1	5	9.	1	1	44	33.	1	1	76
1.	1	1	6	10.	1	1	45	36.	1	1	77
2.	2	2	8	10.	1	1	46	36.	1	1	78
2.	1	1	9	10.	1	1	47	39.	1	1	79
2.	2	2	11	11.	1	1	48	39.	1	1	80
2.	2	2	14	13.	2	2	50	40.	1	1	81
2.	1	1	15	14.	1	1	51	41.	1	1	82
3.	1	1	16	14.	2	2	53	42.	1	1	83
3.	1	1	17	15.	1	1	54	51.	1	1	84
4.	1	1	18	15.	1	1	55	53.	1	1	85
4.	2	2	20	16.	1	1	56	58.	1	1	86
4.	2	2	22	16.	1	1	57	59.	1	1	88
4.	1	1	23	16.	1	1	58	60.	1	1	89
5.	1	1	24	17.	1	1	59	62.	1	1	90
5.	1	1	25	18.	1	1	60	67.	1	1	91
5.	1	1	26	18.	1	1	61	68.	1	1	92
6.	1	1	27	19.	1	1	63	69.	1	1	93
6.	2	2	29	19.	1	1	64	72.	1	1	94
6.	1	1	30	20.	1	1	65	75.	1	1	95
6.	1	1	31	20.	1	1	66	77.	1	1	96
7.	2	2	33	24.	1	1	67	90.	1	1	97
8.	1	1	34	24.	1	1	68	94.	1	1	98
8.	1	1	35	24.	1	1	69	95.	1	1	99
8.	2	2	38	25.	1	1	70	130.	1	1	100
8.	1	1	39	26.	1	1	71				
9.	1	1	40	29.	1	1	72				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
100000.	6				

MEAN	23.320	STD ERR	2.681	MEDIAN	12.550
MODE	0.0	STD DEV	26.271	VARIANCE	690.166
KURTOSIS	2.518	SKEWNESS	1.666	RANGE	130.400
MINIMUM	0.0	MAXIMUM	130.400		

VALID CASES 96 MISSING CASES 6

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MLSTRAIN TOTAL TRAIN MILES 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	5.	1	1	40	10.	1	1	73
0.	1	1	3	5.	2	2	42	11.	1	1	74
0.	1	1	4	5.	1	1	43	12.	1	1	75
0.	1	1	5	5.	1	1	44	12.	1	1	76
1.	3	3	8	5.	1	1	45	12.	1	1	77
1.	2	2	10	5.	1	1	46	12.	1	1	78
1.	1	1	11	5.	1	1	47	13.	1	1	79
1.	1	1	13	6.	2	2	49	13.	1	1	80
1.	1	1	14	6.	1	1	50	14.	1	1	81
1.	1	1	15	6.	1	1	51	14.	1	1	82
1.	1	1	16	6.	1	1	52	14.	1	1	83
2.	1	1	17	7.	1	1	53	14.	1	1	84
2.	2	2	19	7.	1	1	54	14.	1	1	85
2.	1	1	20	7.	2	2	56	15.	1	1	86
2.	1	1	21	7.	1	1	57	16.	1	1	88
2.	1	1	22	7.	1	1	58	16.	1	1	89
2.	2	2	24	7.	2	2	60	17.	1	1	90
3.	3	3	27	7.	1	1	61	17.	1	1	91
3.	1	1	28	8.	1	1	63	19.	1	1	92
3.	2	2	30	8.	1	1	64	19.	1	1	93
3.	1	1	31	8.	1	1	65	19.	1	1	94
4.	1	1	32	8.	1	1	66	28.	1	1	95
4.	2	2	34	9.	2	2	68	31.	1	1	96
4.	1	1	35	9.	1	1	69	33.	1	1	97
4.	1	1	36	9.	1	1	70	39.	1	1	98
4.	1	1	38	10.	1	1	71	44.	1	1	99
5.	1	1	39	10.	1	1	72	51.	1	1	100

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
1000.	6				

MEAN	8.541	STD ERR	0.940	MEDIAN	5.850
MODE	0.500	STD DEV	9.209	VARIANCE	84.807
KURTOSIS	6.340	SKEWNESS	2.337	RANGE	50.500
MINIMUM	0.0	MAXIMUM	50.500		

VALID CASES 96 MISSING CASES 6

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MLSLOCRS LOCOMTV UNIT-MLS ROAD SERVICE 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	6	6	6	4.	1	1	42	12.	1	1	74
0.	2	2	8	4.	1	1	43	12.	2	2	77
0.	1	1	9	5.	1	1	44	12.	1	1	78
0.	3	3	12	5.	1	1	45	12.	1	1	79
1.	2	2	14	5.	1	1	46	13.	1	1	80
1.	1	1	15	5.	1	1	47	14.	1	1	81
1.	1	1	16	5.	2	2	49	14.	1	1	82
1.	2	2	18	5.	3	3	52	14.	1	1	83
2.	1	1	19	6.	1	1	53	14.	1	1	84
2.	2	2	21	6.	1	1	54	15.	1	1	85
2.	1	1	22	6.	1	1	55	16.	1	1	86
2.	1	1	23	6.	1	1	56	16.	1	1	87
2.	1	1	24	6.	1	1	57	16.	1	1	88
2.	1	1	26	7.	1	1	58	17.	1	1	89
2.	1	1	27	7.	1	1	59	18.	1	1	90
2.	1	1	28	7.	1	1	60	18.	1	1	91
3.	1	1	29	7.	1	1	61	19.	1	1	92
3.	1	1	30	7.	1	1	62	22.	1	1	93
3.	1	1	31	7.	1	1	63	25.	1	1	94
3.	2	2	33	8.	2	2	65	31.	1	1	95
3.	2	2	35	9.	1	1	66	31.	1	1	96
3.	1	1	36	9.	1	1	67	33.	1	1	97
3.	1	1	37	9.	2	2	69	34.	1	1	98
4.	1	1	38	9.	1	1	70	44.	1	1	99
4.	1	1	39	9.	1	1	71	51.	1	1	100
4.	1	1	40	10.	1	1	72				
4.	1	1	41	10.	1	1	73				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
1000.	4				

MEAN	8.342	STD ERR	0.950	MEDIAN	5.383
MODE	0.0	STD DEV	9.407	VARIANCE	88.484
KURTOSIS	5.301	SKEWNESS	2.152	RANGE	50.500
MINIMUM	0.0	MAXIMUM	50.500		

VALID CASES 98   MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MLSLOCTS LOCOMTV UNIT-MLS TRAIN SWITCHING 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	52	53	53	2.	1	1	80	8.	1	1	91
0.	6	6	59	2.	1	1	81	8.	1	1	92
0.	2	2	61	2.	1	1	82	9.	1	1	93
0.	3	3	64	4.	1	1	83	9.	1	1	94
1.	2	2	66	5.	1	1	84	10.	1	1	95
1.	1	1	67	5.	1	1	85	13.	1	1	96
1.	3	3	70	5.	1	1	86	13.	1	1	97
1.	3	3	73	6.	1	1	87	14.	1	1	98
1.	1	1	74	6.	1	1	88	18.	1	1	99
2.	2	2	77	6.	1	1	89	22.	1	1	100
2.	2	2	79	6.	1	1	90				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
1000.	4				

MEAN	1.923	STD ERR	0.409	MEDIAN	0.044
MODE	0.0	STD DEV	4.048	VARIANCE	16.384
KURTOSIS	8.054	SKEWNESS	2.772	RANGE	22.100
MINIMUM	0.0	MAXIMUM	22.100		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MLSLOCYS LOCOMTV UNIT-MLS YARD SWITCHING 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	64	65	65	3.	1	1	82	8.	1	1	92
0.	2	2	67	3.	2	2	84	8.	1	1	93
0.	2	2	69	4.	1	1	85	10.	1	1	94
1.	1	1	70	5.	1	1	86	12.	1	1	95
1.	3	3	73	6.	1	1	87	14.	1	1	96
1.	2	2	76	6.	1	1	88	28.	1	1	97
2.	3	3	79	6.	1	1	89	53.	1	1	98
2.	1	1	80	7.	1	1	90	61.	1	1	99
2.	1	1	81	8.	1	1	91	63.	1	1	100

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
1000.	4				

MEAN	3.283	STD ERR	1.082	MEDIAN	0.027
MODE	0.0	STD DEV	10.710	VARIANCE	114.703
KURTOSIS	20.975	SKEWNESS	4.587	RANGE	63.300
MINIMUM	0.0	MAXIMUM	63.300		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

CRMLSLOD CAR-MILES LOADED 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	8.	1	1	38	46.	1	1	72
0.	1	1	2	8.	2	2	40	47.	1	1	73
0.	2	2	4	9.	2	2	42	47.	1	1	74
0.	1	1	5	9.	1	1	43	47.	1	1	76
0.	2	2	7	10.	1	1	44	48.	1	1	77
1.	1	1	8	11.	2	2	46	48.	1	1	78
1.	1	1	9	12.	1	1	47	51.	1	1	79
1.	1	1	10	12.	1	1	48	51.	1	1	80
1.	1	1	11	13.	1	1	49	57.	1	1	81
1.	2	2	13	13.	1	1	50	58.	1	1	82
1.	1	1	14	14.	1	1	51	63.	1	1	83
2.	3	3	17	14.	1	1	52	67.	1	1	84
2.	1	1	18	14.	1	1	53	69.	1	1	85
2.	1	1	19	15.	1	1	54	71.	1	1	86
2.	1	1	20	17.	2	2	56	72.	1	1	87
2.	1	1	21	18.	1	1	57	74.	1	1	88
3.	1	1	22	22.	1	1	58	93.	1	1	89
5.	1	1	23	23.	1	1	59	99.	1	1	90
5.	2	2	26	23.	1	1	60	108.	1	1	91
5.	1	1	27	25.	1	1	61	119.	1	1	92
5.	1	1	28	29.	1	1	62	121.	1	1	93
5.	1	1	29	29.	1	1	63	126.	1	1	94
6.	1	1	30	31.	1	1	64	135.	1	1	95
6.	1	1	31	31.	1	1	65	151.	1	1	96
6.	1	1	32	34.	1	1	66	152.	1	1	97
6.	1	1	33	36.	1	1	67	199.	1	1	98
7.	1	1	34	38.	1	1	68	254.	1	1	99
7.	1	1	35	40.	1	1	69	363.	1	1	100
8.	1	1	36	40.	1	1	70				
8.	1	1	37	45.	1	1	71				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
10000.	4				

MEAN	37.061	STD ERR	5.741	MEDIAN	13.450
MODE	1.500	STD DEV	56.836	VARIANCE	3230.278
KURTOSIS	11.763	SKEWNESS	3.045	RANGE	363.200
MINIMUM	0.0	MAXIMUM	363.200		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

CRMLSEMP CAR-MILES EMPTY 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	9.	1	1	40	37.	1	1	72
0.	2	2	3	9.	1	1	41	38.	1	1	73
0.	1	1	4	9.	1	1	42	41.	1	1	74
0.	1	1	5	9.	1	1	43	43.	1	1	76
0.	2	2	7	10.	1	1	44	44.	1	1	77
1.	1	1	8	10.	1	1	45	47.	1	1	78
1.	2	2	10	11.	1	1	46	47.	1	1	79
1.	1	1	11	11.	2	2	48	48.	1	1	80
1.	1	1	12	12.	1	1	49	49.	1	1	81
1.	3	3	15	12.	1	1	50	51.	1	1	82
1.	1	1	16	12.	1	1	51	60.	1	1	83
2.	2	2	18	14.	1	1	52	64.	1	1	84
2.	1	1	19	15.	1	1	53	68.	1	1	85
2.	1	1	20	17.	1	1	54	69.	1	1	86
2.	1	1	21	17.	1	1	55	69.	1	1	87
3.	1	1	22	18.	1	1	56	74.	1	1	88
4.	1	1	23	20.	1	1	57	74.	1	1	89
4.	2	2	26	20.	1	1	58	85.	1	1	90
4.	1	1	27	22.	1	1	59	98.	1	1	91
5.	1	1	28	23.	1	1	60	101.	1	1	92
5.	1	1	29	24.	1	1	61	118.	1	1	93
5.	1	1	30	25.	1	1	62	121.	1	1	94
6.	1	1	31	26.	1	1	63	125.	1	1	95
6.	1	1	32	29.	2	2	65	126.	1	1	96
6.	1	1	33	31.	1	1	66	130.	1	1	97
6.	2	2	35	31.	1	1	67	196.	1	1	98
7.	1	1	36	33.	1	1	68	203.	1	1	99
7.	1	1	37	34.	1	1	69	370.	1	1	100
8.	1	1	38	37.	1	1	70				
8.	1	1	39	37.	1	1	71				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
10000.	4				

MEAN	34.017	STD ERR	5.382	MEDIAN	12.050
MODE	1.300	STD DEV	53.276	VARIANCE	2838.291
KURTOSIS	15.805	SKEWNESS	3.435	RANGE	370.100
MINIMUM	0.0	MAXIMUM	370.100		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

CRMLSTOT CAR-MILES TOTAL 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	16.	1	1	37	71.	1	1	69
0.	1	1	2	16.	1	1	38	75.	1	1	70
0.	1	1	3	17.	1	1	39	77.	1	1	71
0.	1	1	4	17.	1	1	40	77.	1	1	72
1.	1	1	5	18.	1	1	41	82.	1	1	73
1.	1	1	6	19.	1	1	42	86.	1	1	74
1.	1	1	7	19.	1	1	43	90.	1	1	76
2.	1	1	8	20.	1	1	44	94.	1	1	77
2.	1	1	9	21.	1	1	45	98.	1	1	78
2.	1	1	10	21.	1	1	46	102.	1	1	79
2.	1	1	11	23.	1	1	47	103.	1	1	80
3.	2	2	13	24.	1	1	48	107.	1	1	81
3.	1	1	14	26.	1	1	49	112.	1	1	82
3.	1	1	15	26.	1	1	50	131.	1	1	83
4.	1	1	16	28.	1	1	51	136.	1	1	84
4.	2	2	18	30.	1	1	52	136.	1	1	85
4.	1	1	19	30.	1	1	53	139.	1	1	86
5.	1	1	20	30.	1	1	54	150.	1	1	87
5.	1	1	21	35.	1	1	55	158.	1	1	88
6.	1	1	22	38.	1	1	56	197.	1	1	89
6.	1	1	23	41.	1	1	57	204.	1	1	90
8.	1	1	24	44.	1	1	58	207.	1	1	91
9.	1	1	26	45.	1	1	59	231.	1	1	92
9.	1	1	27	51.	1	1	60	237.	1	1	93
10.	2	2	29	58.	1	1	61	241.	1	1	94
11.	1	1	30	59.	1	1	62	255.	1	1	95
11.	1	1	31	60.	1	1	63	295.	1	1	96
12.	1	1	32	61.	1	1	64	312.	1	1	97
13.	1	1	33	62.	1	1	65	402.	1	1	98
13.	1	1	34	69.	1	1	66	501.	1	1	99
14.	1	1	35	69.	1	1	67	756.	1	1	100
16.	1	1	36	70.	1	1	68				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
10000.	4				

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MEAN	73.572	STD ERR	11.589	MEDIAN	25.750
MODE	2.600	STD DEV	114.724	VARIANCE	13161.648
KURTOSIS	13.230	SKEWNESS	3.205	RANGE	756.000
MINIMUM	0.0	MAXIMUM	756.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TONSREV TOTAL TONS REV FREIGHT 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	2	2	2	83.	1	1	42	281.	1	1	73
4.	1	1	3	85.	2	2	44	327.	1	1	74
7.	1	1	4	90.	1	1	45	347.	1	1	75
8.	2	2	6	94.	1	1	46	353.	1	1	76
11.	1	1	8	102.	1	1	47	388.	1	1	77
12.	1	1	9	106.	1	1	48	397.	1	1	78
14.	1	1	10	116.	1	1	49	412.	1	1	80
15.	1	1	11	123.	1	1	51	435.	1	1	81
18.	1	1	12	130.	2	2	53	485.	1	1	82
19.	2	2	14	142.	1	1	54	524.	1	1	83
20.	1	1	15	144.	1	1	55	533.	1	1	84
22.	2	2	17	150.	1	1	56	579.	1	1	85
26.	1	1	18	152.	1	1	57	597.	1	1	86
29.	1	1	19	161.	1	1	58	606.	1	1	87
31.	2	2	22	171.	1	1	59	617.	1	1	88
32.	1	1	23	173.	1	1	60	650.	1	1	89
36.	2	2	25	177.	1	1	61	667.	1	1	90
42.	2	2	27	180.	1	1	62	673.	1	1	91
44.	2	2	29	194.	1	1	63	685.	1	1	92
47.	2	2	31	198.	1	1	65	746.	1	1	94
49.	1	1	32	202.	1	1	66	749.	1	1	95
55.	3	3	35	203.	1	1	67	755.	1	1	96
58.	1	1	37	226.	1	1	68	917.	1	1	97
64.	1	1	38	231.	1	1	69	932.	1	1	98
65.	1	1	39	238.	1	1	70	1039.	1	1	99
72.	1	1	40	242.	1	1	71	1201.	1	1	100
81.	1	1	41	265.	1	1	72				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	9				

MEAN	233.656	STD ERR	28.246	MEDIAN	123.000
MODE	55.000	STD DEV	272.390	VARIANCE	74196.250
KURTOSIS	1.492	SKEWNESS	1.492	RANGE	1200.000
MINIMUM	1.000	MAXIMUM	1201.000		

VALID CASES 93 MISSING CASES 9

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TONSTOT TOTAL TONS REV-NONREV FREIGHT 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	2	2	2	83.	1	1	41	281.	1	1	73
4.	1	1	3	85.	2	2	43	331.	1	1	74
7.	1	1	4	90.	1	1	44	347.	1	1	75
8.	2	2	6	94.	2	2	46	353.	1	1	76
11.	1	1	8	102.	1	1	47	388.	1	1	77
12.	1	1	9	106.	1	1	48	397.	1	1	78
14.	1	1	10	116.	1	1	49	417.	1	1	80
15.	1	1	11	123.	1	1	51	435.	1	1	81
18.	1	1	12	130.	2	2	53	485.	1	1	82
19.	2	2	14	142.	1	1	54	531.	1	1	83
20.	1	1	15	145.	1	1	55	533.	1	1	84
22.	2	2	17	150.	1	1	56	579.	1	1	85
26.	1	1	18	152.	1	1	57	597.	1	1	86
29.	1	1	19	163.	1	1	58	606.	1	1	87
31.	2	2	22	171.	1	1	59	617.	1	1	88
32.	1	1	23	172.	1	1	60	650.	1	1	89
36.	2	2	25	177.	1	1	61	668.	1	1	90
42.	2	2	27	180.	1	1	62	673.	1	1	91
44.	1	1	28	194.	1	1	63	687.	1	1	92
47.	2	2	30	198.	1	1	65	746.	1	1	94
49.	1	1	31	203.	1	1	66	749.	1	1	95
55.	3	3	34	220.	1	1	67	761.	1	1	96
58.	1	1	35	226.	1	1	68	917.	1	1	97
64.	1	1	37	231.	1	1	69	932.	1	1	98
65.	1	1	38	238.	1	1	70	1039.	1	1	99
72.	1	1	39	242.	1	1	71	1201.	1	1	100
81.	1	1	40	265.	1	1	72				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	9				

MEAN	234.677	STD ERR	28.241	MEDIAN	123.000
MODE	55.000	STD DEV	272.349	VARIANCE	74173.812
KURTOSIS	1.481	SKEWNESS	1.488	RANGE	1200.000
MINIMUM	1.000	MAXIMUM	1201.000		

VALID CASES 93 MISSING CASES 9

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TNMLSREV TON-MILES REV FREIGHT 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
8.	2	2	2	326.	1	1	36	2628.	1	1	70
12.	1	1	3	357.	1	1	37	2752.	1	1	71
19.	1	1	4	374.	1	1	38	2815.	1	1	72
22.	1	1	6	375.	1	1	39	3005.	1	1	73
25.	1	1	7	382.	1	1	40	3104.	1	1	74
40.	1	1	8	409.	1	1	42	3118.	1	1	75
50.	1	1	9	491.	1	1	43	3335.	1	1	76
68.	1	1	10	531.	1	1	44	3703.	1	1	78
77.	1	1	11	533.	1	1	45	3796.	1	1	79
79.	1	1	12	560.	1	1	46	3861.	1	1	80
82.	1	1	13	649.	1	1	47	4172.	1	1	81
87.	1	1	15	682.	1	1	48	4363.	1	1	82
92.	1	1	16	715.	1	1	49	4761.	1	1	83
104.	1	1	17	730.	1	1	51	4975.	1	1	84
109.	1	1	18	883.	1	1	52	5130.	1	1	85
122.	1	1	19	934.	1	1	53	5330.	1	1	87
164.	1	1	20	986.	1	1	54	5378.	1	1	88
172.	1	1	21	1053.	1	1	55	5442.	1	1	89
205.	1	1	22	1106.	1	1	56	5545.	1	1	90
218.	1	1	24	1118.	1	1	57	6007.	1	1	91
232.	1	1	25	1334.	1	1	58	6522.	1	1	92
234.	1	1	26	1372.	1	1	60	6846.	1	1	93
239.	1	1	27	1507.	1	1	61	7107.	1	1	94
261.	1	1	28	1663.	1	1	62	10428.	1	1	96
263.	1	1	29	1765.	1	1	63	10491.	1	1	97
277.	1	1	30	2023.	1	1	64	11899.	1	1	98
281.	1	1	31	2043.	1	1	65	13240.	1	1	99
282.	1	1	33	2083.	1	1	66	15208.	1	1	100
322.	1	1	34	2167.	1	1	67				
324.	1	1	35	2225.	1	1	69				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
999999.	13				

MEAN	2256.348	STD ERR	332.868	MEDIAN	730.000
MODE	8.000	STD DEV	3140.275	VARIANCE	9861329.00
KURTOSIS	4.399	SKEWNESS	2.082	RANGE	15200.000
MINIMUM	8.000	MAXIMUM	15208.000		

VALID CASES 89 MISSING CASES 13

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TNMLSTOT TON-MILES REV-NONREV FREIGHT 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	1	1	1	322.	1	1	35	2083.	1	1	68
8.	2	2	3	324.	1	1	36	2167.	1	1	69
12.	1	1	4	326.	1	1	37	2198.	1	1	70
19.	1	1	5	357.	1	1	38	2225.	1	1	71
22.	1	1	7	374.	1	1	40	2679.	1	1	73
25.	1	1	8	375.	1	1	41	2752.	1	1	74
36.	1	1	9	382.	1	1	42	2815.	1	1	75
40.	1	1	10	409.	1	1	43	3005.	1	1	76
51.	1	1	11	491.	1	1	44	3104.	1	1	77
68.	1	1	12	514.	1	1	45	3118.	1	1	78
77.	1	1	13	531.	1	1	46	3335.	1	1	79
79.	1	1	14	533.	1	1	47	3703.	1	1	80
82.	1	1	15	563.	1	1	48	3796.	1	1	81
87.	1	1	16	650.	1	1	49	3861.	1	1	82
92.	1	1	18	682.	1	1	51	4183.	1	1	84
104.	1	1	19	715.	1	1	52	4363.	1	1	85
109.	1	1	20	730.	1	1	53	4761.	1	1	86
122.	1	1	21	883.	1	1	54	4975.	1	1	87
164.	1	1	22	934.	1	1	55	5330.	1	1	88
172.	1	1	23	986.	1	1	56	5378.	1	1	89
205.	1	1	24	1053.	1	1	57	5442.	1	1	90
218.	1	1	25	1118.	1	1	58	5585.	1	1	91
232.	1	1	26	1173.	1	1	59	6007.	1	1	92
234.	1	1	27	1324.	1	1	60	6522.	1	1	93
239.	1	1	29	1372.	1	1	62	6871.	1	1	95
261.	1	1	30	1389.	1	1	63	7107.	1	1	96
263.	1	1	31	1507.	1	1	64	10428.	1	1	97
277.	1	1	32	1665.	1	1	65	10491.	1	1	98
281.	1	1	33	1765.	1	1	66	11959.	1	1	99
282.	1	1	34	2043.	1	1	67	15214.	1	1	100

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
999999.	11				

MEAN	2030.956	STD ERR	302.568	MEDIAN	682.000
MODE	8.000	STD DEV	2886.312	VARIANCE	8330800.00
KURTOSIS	5.511	SKEWNESS	2.230	RANGE	15213.000
MINIMUM	1.000	MAXIMUM	15214.000		

VALID CASES 91 MISSING CASES 11

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

COMM1 COMMODITY CODE HIGHEST TONNAGE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	10	10	10	24.	22	22	69	34.	1	1	94
8.	5	5	15	26.	4	4	73	35.	1	1	95
10.	3	3	18	28.	7	7	81	39.	3	3	98
11.	14	14	33	29.	2	2	83	40.	1	1	99
14.	9	9	42	32.	8	8	91	41.	1	1	100
20.	5	5	47	33.	2	2	93				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99.	4				

MEAN	19.745	STD ERR	1.077	MEDIAN	23.636
MODE	24.000	STD DEV	10.660	VARIANCE	113.635
KURTOSIS	-0.899	SKEWNESS	-0.123	RANGE	40.000
MINIMUM	1.000	MAXIMUM	41.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TONS1 TONS - HIGHEST COMMODITY 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	1	1	1	39.	1	1	42	150.	2	2	76
3.	1	1	2	43.	1	1	43	157.	1	1	77
4.	2	2	4	44.	1	1	44	162.	1	1	78
5.	1	1	5	47.	1	1	45	163.	1	1	79
6.	1	1	6	48.	1	1	46	166.	1	1	80
7.	2	2	8	54.	2	2	48	180.	1	1	81
8.	3	3	11	59.	1	1	49	199.	1	1	82
9.	2	2	13	63.	2	2	51	203.	1	1	83
10.	2	2	15	64.	1	1	52	230.	1	1	84
12.	2	2	17	66.	1	1	53	241.	1	1	85
14.	2	2	19	68.	1	1	54	305.	1	1	86
16.	1	1	20	73.	1	1	55	382.	1	1	87
17.	2	2	22	82.	1	1	56	387.	1	1	88
18.	1	1	23	103.	1	1	57	400.	1	1	89
20.	1	1	24	109.	1	1	58	404.	1	1	90
26.	2	2	27	115.	3	3	61	448.	1	1	91
28.	1	1	28	121.	1	1	62	522.	1	1	92
29.	1	1	29	124.	2	2	64	533.	1	1	93
31.	2	2	31	125.	1	1	65	579.	1	1	94
32.	2	2	33	130.	1	1	66	587.	1	1	95
33.	2	2	35	132.	1	1	67	650.	1	1	96
34.	2	2	37	137.	1	1	68	669.	1	1	97
35.	1	1	38	139.	1	1	69	698.	1	1	98
36.	2	2	40	142.	3	3	72	876.	1	1	99
38.	1	1	41	149.	1	1	73	917.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	4				

MEAN	144.306	STD ERR	19.989	MEDIAN	63.000
MODE	8.000	STD DEV	197.879	VARIANCE	39156.215
KURTOSIS	3.938	SKEWNESS	2.106	RANGE	916.000
MINIMUM	1.000	MAXIMUM	917.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

REV1 REV - HIGHEST COMMODITY $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
3.	1	1	1	73.	1	1	38	185.	1	1	72
4.	2	2	3	77.	1	1	39	196.	1	1	73
5.	1	1	4	83.	2	2	41	204.	1	1	74
8.	1	1	5	87.	2	2	43	209.	1	1	75
9.	1	1	6	88.	1	1	44	211.	1	1	76
11.	1	1	7	90.	1	1	45	214.	1	1	77
12.	1	1	8	104.	1	1	46	223.	1	1	78
15.	1	1	9	109.	1	1	47	231.	1	1	79
16.	1	1	10	110.	1	1	48	235.	1	1	80
17.	1	1	11	112.	1	1	49	241.	1	1	81
20.	1	1	13	115.	1	1	50	245.	1	1	82
24.	2	2	15	116.	1	1	51	255.	1	1	83
26.	2	2	17	117.	1	1	52	260.	1	1	84
30.	1	1	18	118.	2	2	54	262.	1	1	85
32.	1	1	19	120.	1	1	55	268.	1	1	86
36.	1	1	20	122.	1	1	56	309.	1	1	88
38.	1	1	21	124.	2	2	58	311.	1	1	89
40.	1	1	22	125.	1	1	59	386.	1	1	90
46.	1	1	23	130.	1	1	60	398.	1	1	91
47.	1	1	24	132.	1	1	61	451.	1	1	92
48.	1	1	25	139.	1	1	63	471.	1	1	93
51.	1	1	26	144.	1	1	64	494.	1	1	94
53.	1	1	27	145.	1	1	65	505.	1	1	95
55.	1	1	28	149.	1	1	66	510.	1	1	96
59.	1	1	29	150.	1	1	67	545.	1	1	97
60.	1	1	30	164.	1	1	68	671.	1	1	98
62.	4	4	34	171.	1	1	69	693.	1	1	99
66.	1	1	35	174.	1	1	70	884.	1	1	100
68.	1	1	36	184.	1	1	71				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	6				

MEAN	158.875	STD ERR	16.988	MEDIAN	115.500
MODE	62.000	STD DEV	166.452	VARIANCE	27706.387
KURTOSIS	4.208	SKEWNESS	1.973	RANGE	881.000
MINIMUM	3.000	MAXIMUM	884.000		

VALID CASES 96 MISSING CASES 6

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

COMM2 COMMODITY CODE 2ND HIGHEST TONNAGE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	12	13	13	23.	1	1	41	33.	3	3	86
8.	1	1	14	24.	6	7	47	35.	2	2	88
11.	4	4	19	25.	1	1	48	39.	6	7	95
13.	1	1	20	26.	7	8	56	40.	3	3	98
14.	10	11	31	28.	12	13	69	41.	1	1	99
17.	1	1	32	29.	3	3	73	44.	1	1	100
19.	1	1	33	30.	1	1	74				
20.	6	7	40	32.	8	9	82				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99.	11				

MEAN	22.681	STD ERR	1.238	MEDIAN	25.714
MODE	1.000	STD DEV	11.809	VARIANCE	139.441
KURTOSIS	-0.707	SKEWNESS	-0.441	RANGE	43.000
MINIMUM	1.000	MAXIMUM	44.000		

VALID CASES 91 MISSING CASES 11

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TONS2 TONS - 2ND HIGHEST COMMODITY 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	8	9	9	22.	2	2	62	70.	1	1	82
1.	6	7	15	23.	2	2	64	87.	2	2	85
2.	5	5	21	24.	2	2	66	90.	1	1	86
3.	4	4	25	27.	1	1	67	92.	1	1	87
4.	6	7	32	30.	1	1	68	96.	1	1	88
5.	4	4	36	32.	1	1	69	98.	1	1	89
6.	2	2	38	33.	1	1	70	104.	1	1	90
7.	2	2	41	34.	1	1	71	117.	1	1	91
8.	7	8	48	35.	1	1	73	118.	2	2	93
9.	3	3	52	36.	1	1	74	136.	1	1	95
12.	2	2	54	37.	2	2	76	140.	1	1	96
16.	1	1	55	42.	1	1	77	160.	1	1	97
17.	1	1	56	43.	1	1	78	184.	1	1	98
18.	1	1	57	44.	1	1	79	201.	1	1	99
20.	1	1	58	64.	1	1	80	306.	1	1	100
21.	1	1	59	65.	1	1	81				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	11				

MEAN	35.143	STD ERR	5.605	MEDIAN	9.000
MODE	0.0	STD DEV	53.468	VARIANCE	2858.873
KURTOSIS	7.024	SKEWNESS	2.437	RANGE	306.000
MINIMUM	0.0	MAXIMUM	306.000		

VALID CASES 91 MISSING CASES 11

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

REV2 REV - 2ND HIGHEST COMMODITY $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	4	4	4	20.	2	2	49	70.	2	2	79
1.	3	3	8	21.	2	2	52	72.	1	1	80
2.	6	7	15	24.	2	2	54	76.	1	1	81
3.	3	3	18	25.	2	2	56	80.	1	1	82
4.	3	3	21	29.	1	1	57	83.	1	1	83
5.	1	1	22	31.	2	2	60	92.	1	1	84
6.	4	4	27	34.	1	1	61	99.	2	2	87
7.	1	1	28	37.	1	1	62	110.	1	1	88
8.	1	1	29	38.	1	1	63	130.	1	1	89
9.	2	2	31	40.	2	2	65	144.	1	1	90
10.	3	3	35	47.	1	1	66	148.	1	1	91
11.	1	1	36	49.	1	1	67	154.	1	1	92
12.	3	3	39	50.	1	1	69	163.	1	1	93
13.	1	1	40	53.	1	1	70	179.	1	1	94
14.	1	1	42	54.	1	1	71	180.	1	1	96
16.	1	1	43	57.	1	1	72	284.	1	1	97
17.	2	2	45	58.	1	1	73	286.	1	1	98
18.	1	1	46	64.	2	2	75	528.	1	1	99
19.	1	1	47	69.	1	1	76	671.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	13				

MEAN	56.539	STD ERR	10.750	MEDIAN	20.750
MODE	2.000	STD DEV	101.419	VARIANCE	10285.797
KURTOSIS	18.326	SKEWNESS	3.954	RANGE	671.000
MINIMUM	0.0	MAXIMUM	671.000		

VALID CASES 89 MISSING CASES 13

FILE RAIL4 (CREATION DATE = 06/17/76)

COMM3 COMMODITY CODE 3RD HIGHEST TONNAGE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	7	9	9	26.	10	12	54	34.	2	2	88
8.	2	2	11	27.	2	2	57	35.	2	2	90
11.	5	6	17	28.	13	16	73	36.	1	1	91
14.	5	6	23	29.	1	1	74	39.	1	1	93
20.	7	9	32	30.	3	4	78	40.	6	7	100
21.	1	1	33	32.	4	5	83				
24.	7	9	42	33.	2	2	85				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99.	21				

MEAN	23.716	STD ERR	1.168	MEDIAN	26.150
MODE	28.000	STD DEV	10.511	VARIANCE	110.480
KURTOSIS	-0.173	SKEWNESS	-0.675	RANGE	39.000
MINIMUM	1.000	MAXIMUM	40.000		

VALID CASES 81 MISSING CASES 21

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TONS3 TONS - 3RD HIGHEST COMMODITY 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	12	15	15	12.	2	2	63	47.	1	1	85
1.	10	12	27	13.	1	1	64	49.	1	1	86
2.	5	6	33	15.	1	1	65	50.	1	1	88
3.	2	2	36	20.	1	1	67	56.	2	2	90
4.	4	5	41	23.	4	5	72	64.	1	1	91
5.	4	5	46	24.	2	2	74	67.	1	1	93
6.	4	5	51	26.	3	4	78	78.	1	1	94
7.	2	2	53	29.	1	1	79	83.	1	1	95
8.	1	1	54	32.	1	1	80	85.	1	1	96
9.	2	2	57	33.	1	1	81	90.	1	1	98
10.	2	2	59	34.	1	1	83	118.	1	1	99
11.	1	1	60	36.	1	1	84	133.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	21				

MEAN	19.593	STD ERR	3.132	MEDIAN	6.375
MODE	0.0	STD DEV	28.189	VARIANCE	794.618
KURTOSIS	3.908	SKEWNESS	2.027	RANGE	133.000
MINIMUM	0.0	MAXIMUM	133.000		

VALID CASES 81 MISSING CASES 21

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

REV3 REV - 3RD HIGHEST COMMODITY $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	5	6	6	21.	1	1	56	48.	1	1	81
1.	10	13	19	24.	1	1	57	51.	1	1	82
2.	4	5	24	25.	1	1	58	52.	1	1	84
3.	5	6	30	26.	1	1	59	55.	1	1	85
4.	2	3	33	28.	3	4	63	59.	1	1	86
5.	1	1	34	31.	2	3	66	62.	1	1	87
6.	1	1	35	32.	1	1	67	72.	1	1	89
7.	2	3	38	33.	2	3	70	73.	1	1	90
9.	2	3	41	35.	1	1	71	78.	1	1	91
10.	3	4	44	36.	1	1	72	118.	1	1	92
12.	1	1	46	37.	1	1	73	127.	1	1	94
13.	1	1	47	40.	1	1	75	136.	1	1	95
15.	1	1	48	42.	1	1	76	141.	1	1	96
16.	1	1	49	43.	1	1	77	150.	1	1	97
18.	2	3	52	46.	1	1	78	155.	1	1	99
20.	2	3	54	47.	1	1	80	318.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	23				

MEAN	33.000	STD ERR	5.564	MEDIAN	17.750
MODE	1.000	STD DEV	49.458	VARIANCE	2446.051
KURTOSIS	12.912	SKEWNESS	3.143	RANGE	318.000
MINIMUM	0.0	MAXIMUM	318.000		

VALID CASES 79 MISSING CASES 23

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

COMM4 COMMODITY CODE 4TH HIGHEST TONNAGE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	3	4	4	27.	1	1	44	37.	1	1	83
11.	4	5	9	28.	9	12	56	39.	3	4	87
13.	1	1	11	29.	4	5	61	40.	6	8	95
14.	8	11	21	30.	1	1	63	41.	2	3	97
20.	5	7	28	32.	7	9	72	42.	1	1	99
24.	6	8	36	33.	2	3	75	46.	1	1	100
25.	1	1	37	34.	1	1	76				
26.	4	5	43	35.	4	5	81				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99.	27				

MEAN	26.640	STD ERR	1.201	MEDIAN	28.000
MODE	28.000	STD DEV	10.402	VARIANCE	108.206
KURTOSIS	-0.264	SKEWNESS	-0.526	RANGE	45.000
MINIMUM	1.000	MAXIMUM	46.000		

VALID CASES 75 MISSING CASES 27

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TONS4 TONS - 4TH HIGHEST COMMODITY 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	18	24	24	10.	2	3	70	35.	1	1	92
1.	7	9	34	11.	3	4	74	56.	1	1	93
2.	5	7	41	13.	2	3	77	61.	1	1	95
3.	4	5	46	15.	3	4	81	63.	1	1	96
4.	4	5	51	16.	1	1	82	69.	1	1	97
5.	7	9	61	19.	1	1	84	73.	1	1	99
6.	2	3	64	23.	2	3	86	79.	1	1	100
7.	2	3	66	24.	1	1	88				
9.	1	1	68	31.	2	3	91				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	28				

MEAN	11.378	STD ERR	2.156	MEDIAN	4.250
MODE	0.0	STD DEV	18.544	VARIANCE	343.882
KURTOSIS	4.486	SKEWNESS	2.304	RANGE	79.000
MINIMUM	0.0	MAXIMUM	79.000		

VALID CASES 74 MISSING CASES 28

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

REV4 REV - 4TH HIGHEST COMMODITY $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	10	14	14	12.	2	3	60	40.	1	1	84
1.	10	14	27	13.	4	5	66	44.	1	1	85
2.	2	3	30	15.	1	1	67	45.	1	1	86
3.	5	7	37	16.	3	4	71	49.	1	1	88
4.	1	1	38	19.	1	1	73	54.	2	3	90
5.	2	3	41	23.	1	1	74	60.	2	3	93
6.	1	1	42	27.	1	1	75	64.	2	3	96
7.	3	4	47	29.	2	3	78	70.	1	1	97
8.	4	5	52	30.	1	1	79	91.	1	1	99
10.	1	1	53	31.	1	1	81	110.	1	1	100
11.	3	4	58	33.	1	1	82				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	29				

MEAN	17.945	STD ERR	2.765	MEDIAN	8.125
MODE	0.0	STD DEV	23.628	VARIANCE	558.302
KURTOSIS	2.838	SKEWNESS	1.777	RANGE	110.000
MINIMUM	0.0	MAXIMUM	110.000		

VALID CASES 73 MISSING CASES 29

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

COMM5 COMMODITY CODE 5TH HIGHEST TONNAGE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	4	6	6	24.	6	9	37	34.	2	3	74
8.	1	1	7	25.	2	3	40	35.	4	6	80
11.	2	3	10	26.	1	1	41	37.	1	1	81
13.	1	1	11	28.	7	10	51	39.	1	1	83
14.	3	4	16	29.	2	3	54	40.	10	14	97
20.	6	9	24	32.	7	10	64	42.	1	1	99
22.	3	4	29	33.	5	7	71	46.	1	1	100

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99.	32				

MEAN	27.286	STD ERR	1.283	MEDIAN	28.357
MODE	40.000	STD DEV	10.734	VARIANCE	115.221
KURTOSIS	0.089	SKEWNESS	-0.755	RANGE	45.000
MINIMUM	1.000	MAXIMUM	46.000		

VALID CASES 70 MISSING CASES 32

FILE RAIL4 (CREATION DATE = 06/17/76)

TONS5 TONS - 5TH HIGHEST COMMODITY 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	20	29	29	7.	1	1	81	29.	1	1	94
1.	10	14	43	8.	2	3	84	46.	1	1	96
2.	8	11	54	9.	2	3	87	53.	1	1	97
3.	5	7	61	14.	1	1	89	57.	1	1	99
4.	3	4	66	16.	1	1	90	70.	1	1	100
5.	7	10	76	18.	1	1	91				
6.	3	4	80	28.	1	1	93				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	32				

MEAN	6.829	STD ERR	1.639	MEDIAN	2.125
MODE	0.0	STD DEV	13.709	VARIANCE	187.941
KURTOSIS	9.181	SKEWNESS	3.095	RANGE	70.000
MINIMUM	0.0	MAXIMUM	70.000		

VALID CASES 70 MISSING CASES 32

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

REV5 REV - 5TH HIGHEST COMMODITY $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	14	20	20	9.	1	1	68	33.	1	1	88
1.	7	10	30	10.	1	1	70	37.	1	1	90
2.	4	6	36	13.	3	4	74	40.	1	1	91
3.	4	6	42	15.	2	3	77	43.	1	1	93
4.	2	3	45	16.	1	1	78	46.	1	1	94
5.	4	6	51	19.	3	4	83	54.	1	1	96
6.	6	9	59	23.	1	1	84	58.	1	1	97
7.	3	4	64	27.	1	1	86	124.	1	1	99
8.	2	3	67	28.	1	1	87	158.	1	1	100

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	33				

MEAN	13.913	STD ERR	3.148	MEDIAN	5.375
MODE	0.0	STD DEV	26.146	VARIANCE	683.638
KURTOSIS	15.499	SKEWNESS	3.704	RANGE	158.000
MINIMUM	0.0	MAXIMUM	158.000		

VALID CASES 69 MISSING CASES 33

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TONSORIG TOTAL TONS REV FREIGHT ORIGINATED 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	4	4	4	42.	1	1	48	148.	1	1	76
1.	3	3	7	44.	2	2	50	150.	1	1	77
2.	6	6	13	45.	1	1	51	180.	2	2	79
3.	1	1	14	50.	1	1	52	189.	1	1	80
4.	1	1	15	53.	1	1	53	194.	1	1	81
5.	3	3	18	54.	1	1	54	198.	1	1	82
6.	5	5	23	55.	1	1	55	199.	1	1	83
7.	2	2	26	59.	1	1	56	203.	1	1	84
8.	1	1	27	63.	1	1	57	230.	1	1	85
9.	1	1	28	65.	1	1	58	240.	1	1	86
10.	1	1	29	67.	2	2	60	243.	1	1	87
11.	1	1	30	68.	1	1	61	278.	1	1	88
12.	1	1	31	79.	1	1	62	307.	1	1	89
14.	3	3	34	82.	1	1	63	333.	1	1	90
15.	1	1	35	94.	1	1	64	368.	1	1	91
18.	1	1	36	99.	1	1	65	397.	1	1	92
20.	2	2	38	102.	1	1	66	445.	1	1	93
24.	1	1	39	112.	1	1	67	533.	1	1	94
28.	1	1	40	120.	1	1	68	579.	1	1	95
29.	1	1	41	121.	1	1	69	650.	1	1	96
31.	1	1	42	123.	1	1	70	669.	1	1	97
33.	1	1	43	124.	1	1	71	698.	1	1	98
37.	2	2	45	130.	1	1	72	778.	1	1	99
38.	1	1	46	136.	1	1	73	872.	1	1	100
39.	1	1	47	147.	1	1	74				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	4				

MEAN	122.939	STD ERR	18.730	MEDIAN	44.500
MODE	2.000	STD DEV	185.416	VARIANCE	34379.254
KURTOSIS	4.659	SKEWNESS	2.247	RANGE	872.000
MINIMUM	0.0	MAXIMUM	872.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TONSRECD TOTAL TONS REV FREIGHT RECEIVED 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	15	15	15	32.	1	1	52	154.	1	1	80
1.	4	4	19	35.	1	1	53	161.	1	1	81
2.	1	1	20	38.	1	1	54	167.	1	1	82
3.	2	2	22	41.	2	2	56	172.	1	1	83
4.	3	3	26	42.	1	1	57	189.	1	1	84
5.	5	5	31	45.	2	2	59	208.	2	2	86
6.	1	1	32	47.	1	1	60	210.	1	1	87
7.	1	1	33	50.	1	1	61	213.	1	1	88
8.	1	1	34	51.	2	2	63	236.	1	1	89
9.	1	1	35	53.	1	1	64	306.	1	1	90
10.	1	1	36	54.	2	2	66	316.	1	1	91
12.	2	2	38	64.	1	1	67	319.	1	1	92
13.	1	1	39	72.	1	1	68	320.	1	1	93
14.	1	1	40	75.	1	1	69	390.	1	1	94
16.	1	1	41	76.	2	2	71	403.	1	1	95
18.	2	2	43	78.	1	1	72	425.	1	1	96
20.	2	2	45	84.	1	1	73	448.	1	1	97
22.	2	2	47	98.	1	1	74	552.	1	1	98
23.	1	1	48	114.	1	1	76	564.	1	1	99
27.	1	1	49	134.	1	1	77	615.	1	1	100
28.	1	1	50	135.	1	1	78				
29.	1	1	51	140.	1	1	79				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	4				

MEAN	89.633	STD ERR	13.904	MEDIAN	28.500
MODE	0.0	STD DEV	137.647	VARIANCE	18946.781
KURTOSIS	3.716	SKEWNESS	2.061	RANGE	615.000
MINIMUM	0.0	MAXIMUM	615.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TOTTNSRV TOTAL TONS REV FREIGHT CARRIED 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	1	1	1	84.	1	1	43	270.	1	1	73
5.	1	1	2	85.	1	1	44	278.	1	1	74
7.	1	1	3	86.	1	1	45	281.	1	1	76
8.	2	2	5	87.	1	1	46	306.	1	1	77
10.	1	1	6	90.	1	1	47	347.	1	1	78
11.	3	3	9	102.	1	1	48	353.	1	1	79
14.	1	1	10	116.	1	1	49	388.	1	1	80
15.	1	1	11	120.	1	1	50	397.	1	1	81
19.	2	2	13	121.	1	1	51	406.	1	1	82
20.	1	1	14	123.	1	1	52	412.	1	1	83
21.	1	1	15	130.	2	2	54	435.	1	1	84
22.	2	2	17	142.	1	1	55	484.	1	1	85
26.	1	1	18	144.	1	1	56	524.	1	1	86
29.	1	1	19	147.	1	1	57	533.	1	1	87
31.	1	1	20	150.	1	1	58	579.	1	1	88
32.	2	2	22	152.	1	1	59	597.	1	1	89
36.	3	3	26	163.	1	1	60	606.	1	1	90
42.	1	1	27	171.	1	1	61	617.	1	1	91
43.	1	1	28	176.	1	1	62	650.	1	1	92
44.	2	2	30	177.	1	1	63	667.	1	1	93
47.	2	2	32	180.	1	1	64	673.	1	1	94
49.	1	1	33	194.	1	1	65	698.	1	1	95
50.	1	1	34	198.	1	1	66	746.	1	1	96
55.	3	3	37	203.	2	2	68	755.	1	1	97
63.	1	1	38	220.	1	1	69	917.	1	1	98
64.	1	1	39	226.	1	1	70	932.	1	1	99
65.	2	2	41	231.	1	1	71	1039.	1	1	100
81.	1	1	42	242.	1	1	72				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	4				

MEAN	212.592	STD ERR	24.606	MEDIAN	120.500
MODE	11.000	STD DEV	243.590	VARIANCE	59336.316
KURTOSIS	1.391	SKEWNESS	1.486	RANGE	1038.000
MINIMUM	1.000	MAXIMUM	1039.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

GROSSREV GROSS FREIGHT REVENUE $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
4.	1	1	1	130.	1	1	38	332.	1	1	70
9.	1	1	2	155.	1	1	39	342.	1	1	71
10.	1	1	3	157.	1	1	40	350.	1	1	72
14.	1	1	4	168.	1	1	41	388.	1	1	73
16.	1	1	5	175.	1	1	42	394.	1	1	74
20.	1	1	6	181.	1	1	43	399.	1	1	75
24.	3	3	9	183.	1	1	44	415.	1	1	76
31.	1	1	10	184.	1	1	45	457.	1	1	77
32.	1	1	11	188.	1	1	46	496.	1	1	78
36.	1	1	13	191.	1	1	47	501.	1	1	79
41.	1	1	14	199.	1	1	48	502.	1	1	80
45.	1	1	15	202.	1	1	49	509.	2	2	82
49.	1	1	16	205.	1	1	50	518.	1	1	83
54.	1	1	17	211.	1	1	51	548.	1	1	84
55.	1	1	18	213.	1	1	52	554.	1	1	85
60.	1	1	19	220.	2	2	54	593.	1	1	86
62.	1	1	20	231.	1	1	55	597.	1	1	88
64.	2	2	22	234.	1	1	56	606.	1	1	89
67.	1	1	23	237.	1	1	57	609.	1	1	90
68.	1	1	24	240.	1	1	58	658.	1	1	91
71.	1	1	25	244.	1	1	59	671.	1	1	92
83.	1	1	26	251.	1	1	60	722.	1	1	93
85.	1	1	27	260.	1	1	61	749.	1	1	94
91.	1	1	28	262.	1	1	63	778.	1	1	95
94.	2	2	30	267.	1	1	64	856.	1	1	96
96.	1	1	31	273.	1	1	65	884.	1	1	97
100.	1	1	32	287.	1	1	66	923.	1	1	98
112.	1	1	33	304.	1	1	67	930.	1	1	99
118.	2	2	35	307.	1	1	68	938.	1	1	100
126.	1	1	36	317.	1	1	69				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
9999.	6				

MEAN	277.969	STD ERR	25.248	MEDIAN	205.500
MODE	24.000	STD DEV	247.377	VARIANCE	61195.578
KURTOSIS	0.241	SKEWNESS	1.065	RANGE	934.000
MINIMUM	4.000	MAXIMUM	938.000		

VALID CASES 96 MISSING CASES 6

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PCTMOWS TOTMOWS AS A PERCENTAGE OF GRANDTOT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	23.	1	1	34	36.	1	1	68
2.	1	1	2	23.	1	1	35	37.	1	1	69
7.	1	1	3	23.	1	1	36	38.	1	1	70
10.	1	1	4	23.	1	1	37	38.	1	1	71
11.	1	1	5	23.	1	1	38	38.	1	1	72
11.	1	1	6	24.	1	1	39	38.	1	1	73
13.	1	1	7	24.	1	1	40	38.	1	1	74
14.	1	1	8	24.	1	1	41	39.	1	1	75
14.	1	1	9	25.	1	1	42	39.	1	1	75
14.	1	1	10	25.	1	1	43	41.	1	1	76
15.	1	1	11	25.	1	1	44	41.	1	1	77
15.	1	1	12	25.	1	1	45	42.	1	1	78
15.	1	1	13	25.	1	1	46	42.	1	1	79
16.	1	1	14	26.	1	1	47	42.	1	1	80
17.	1	1	15	26.	1	1	48	42.	1	1	81
17.	1	1	16	26.	1	1	49	44.	1	1	82
17.	1	1	17	26.	1	1	50	44.	1	1	83
17.	1	1	18	27.	1	1	51	45.	1	1	84
18.	1	1	19	29.	1	1	52	45.	1	1	85
18.	1	1	20	30.	1	1	53	48.	1	1	86
18.	1	1	21	30.	1	1	54	48.	1	1	87
18.	1	1	22	30.	1	1	55	49.	1	1	88
19.	1	1	23	31.	1	1	56	49.	1	1	89
19.	1	1	24	31.	1	1	57	51.	1	1	90
19.	1	1	25	31.	1	1	58	53.	1	1	91
19.	1	1	25	31.	1	1	59	53.	1	1	92
21.	1	1	26	31.	1	1	60	54.	1	1	93
21.	1	1	27	32.	1	1	61	54.	1	1	94
21.	1	1	28	33.	1	1	62	55.	1	1	95
22.	1	1	29	34.	1	1	63	56.	1	1	96
22.	1	1	30	34.	1	1	64	57.	1	1	97
22.	1	1	31	35.	1	1	65	58.	1	1	98
23.	1	1	32	35.	1	1	66	60.	1	1	99
23.	1	1	33	35.	1	1	67	68.	1	1	100

MEAN	30.245	STD ERR	1.380	MEDIAN	26.368
MODE	0.0	STD DEV	13.937	VARIANCE	194.253
KURTOSIS	-0.424	SKEWNESS	0.416	RANGE	67.521
MINIMUM	0.0	MAXIMUM	67.521		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PCTMOE TOTMOE AS A PERCENTAGE OF GRANDTOT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	3	3	3	10.	1	1	36	15.	1	1	69
2.	1	1	4	10.	1	1	37	16.	1	1	70
2.	1	1	5	10.	1	1	38	16.	1	1	71
2.	1	1	6	10.	1	1	39	17.	1	1	72
3.	1	1	7	10.	1	1	40	17.	1	1	73
3.	1	1	8	10.	1	1	41	17.	1	1	74
4.	1	1	9	10.	1	1	42	17.	1	1	75
4.	1	1	10	11.	1	1	43	17.	1	1	75
4.	1	1	11	11.	1	1	44	17.	1	1	76
5.	1	1	12	11.	1	1	45	18.	1	1	77
5.	1	1	13	11.	1	1	46	18.	1	1	78
5.	1	1	14	11.	1	1	47	19.	1	1	79
5.	1	1	15	11.	1	1	48	19.	1	1	80
5.	1	1	16	11.	1	1	49	20.	1	1	81
5.	1	1	17	11.	1	1	50	20.	1	1	82
5.	1	1	18	12.	1	1	51	20.	1	1	83
6.	1	1	19	12.	1	1	52	20.	1	1	84
6.	1	1	20	12.	1	1	53	20.	1	1	85
7.	1	1	21	12.	1	1	54	20.	1	1	86
7.	1	1	22	12.	1	1	55	21.	1	1	87
7.	1	1	23	12.	1	1	56	21.	1	1	88
7.	1	1	24	13.	1	1	57	22.	1	1	89
8.	1	1	25	13.	1	1	58	22.	1	1	90
8.	1	1	25	13.	1	1	59	22.	1	1	91
8.	1	1	26	13.	1	1	60	23.	1	1	92
8.	2	2	28	13.	1	1	61	23.	1	1	93
9.	1	1	29	13.	1	1	62	30.	1	1	94
10.	1	1	30	14.	1	1	63	30.	1	1	95
10.	1	1	31	14.	1	1	64	31.	1	1	96
10.	1	1	32	14.	1	1	65	32.	1	1	97
10.	1	1	33	15.	1	1	66	34.	1	1	98
10.	1	1	34	15.	1	1	67	52.	1	1	99
10.	1	1	35	15.	1	1	68	52.	1	1	100

MEAN	13.330	STD ERR	0.890	MEDIAN	11.498
MODE	0.0	STD DEV	8.985	VARIANCE	80.723
KURTOSIS	5.120	SKEWNESS	1.765	RANGE	52.317
MINIMUM	0.0	MAXIMUM	52.317		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PCTTRAF TRAFFIC AS A PERCENTAGE OF GRANDTOT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	12	12	12	1.	1	1	42	3.	1	1	73
0.	1	1	13	2.	1	1	43	3.	1	1	74
0.	1	1	14	2.	1	1	44	4.	1	1	75
0.	1	1	15	2.	1	1	45	4.	1	1	75
0.	1	1	16	2.	1	1	46	4.	1	1	76
0.	1	1	17	2.	1	1	47	4.	1	1	77
0.	1	1	18	2.	1	1	48	5.	1	1	78
0.	1	1	19	2.	1	1	49	5.	1	1	79
0.	1	1	20	2.	1	1	50	5.	1	1	80
1.	1	1	21	2.	1	1	51	5.	1	1	81
1.	1	1	22	2.	1	1	52	5.	1	1	82
1.	1	1	23	2.	1	1	53	6.	1	1	83
1.	1	1	24	2.	1	1	54	6.	1	1	84
1.	1	1	25	2.	1	1	55	6.	1	1	85
1.	1	1	25	2.	1	1	56	6.	1	1	86
1.	1	1	26	2.	1	1	57	7.	1	1	87
1.	1	1	27	2.	1	1	58	7.	1	1	88
1.	1	1	28	2.	1	1	59	7.	1	1	89
1.	1	1	29	2.	1	1	60	7.	1	1	90
1.	1	1	30	2.	1	1	61	7.	1	1	91
1.	1	1	31	3.	1	1	62	8.	1	1	92
1.	1	1	32	3.	1	1	63	8.	1	1	93
1.	1	1	33	3.	1	1	64	8.	1	1	94
1.	1	1	34	3.	1	1	65	8.	1	1	95
1.	1	1	35	3.	1	1	66	9.	1	1	96
1.	1	1	36	3.	1	1	67	9.	1	1	97
1.	1	1	37	3.	1	1	68	11.	1	1	98
1.	1	1	38	3.	1	1	69	12.	1	1	99
1.	1	1	39	3.	1	1	70	23.	1	1	100
1.	1	1	40	3.	1	1	71				
1.	1	1	41	3.	1	1	72				

MEAN	2.903	STD ERR	0.333	MEDIAN	1.845
MODE	0.0	STD DEV	3.362	VARIANCE	11.304
KURTOSIS	11.345	SKEWNESS	2.683	RANGE	23.067
MINIMUM	0.0	MAXIMUM	23.067		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PCTTRAN TOTTRANNS AS A PERCENTAGE OF GRANDTOT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	27.	1	1	34	39.	1	1	68
3.	1	1	2	27.	1	1	35	39.	1	1	69
10.	1	1	3	27.	1	1	36	39.	1	1	70
11.	1	1	4	27.	1	1	37	39.	1	1	71
12.	1	1	5	27.	1	1	38	39.	1	1	72
13.	1	1	6	28.	1	1	39	40.	1	1	73
15.	1	1	7	28.	1	1	40	40.	1	1	74
18.	1	1	8	28.	1	1	41	40.	1	1	75
19.	1	1	9	28.	1	1	42	41.	1	1	75
19.	1	1	10	29.	1	1	43	41.	1	1	76
20.	1	1	11	29.	1	1	44	41.	1	1	77
20.	1	1	12	29.	1	1	45	42.	1	1	78
20.	1	1	13	30.	1	1	46	42.	1	1	79
21.	1	1	14	30.	1	1	47	43.	1	1	80
21.	1	1	15	31.	1	1	48	44.	1	1	81
21.	1	1	16	32.	1	1	49	44.	1	1	82
21.	1	1	17	32.	1	1	50	44.	1	1	83
22.	1	1	18	33.	1	1	51	45.	1	1	84
22.	1	1	19	33.	1	1	52	46.	1	1	85
23.	1	1	20	33.	1	1	53	47.	1	1	86
23.	1	1	21	33.	1	1	54	48.	1	1	87
24.	1	1	22	34.	1	1	55	49.	1	1	88
24.	1	1	23	34.	1	1	56	49.	1	1	89
25.	1	1	24	35.	1	1	57	50.	1	1	90
25.	1	1	25	35.	1	1	58	51.	1	1	91
25.	1	1	25	36.	1	1	59	52.	1	1	92
25.	1	1	26	36.	1	1	60	55.	1	1	93
25.	1	1	27	37.	1	1	61	56.	1	1	94
26.	1	1	28	37.	1	1	62	56.	1	1	95
26.	1	1	29	37.	1	1	63	59.	1	1	96
27.	1	1	30	38.	1	1	64	61.	1	1	97
27.	1	1	31	38.	1	1	65	62.	1	1	98
27.	1	1	32	39.	1	1	66	63.	1	1	99
27.	1	1	33	39.	1	1	67	88.	1	1	100

MEAN	33.507	STD ERR	1.345	MEDIAN	32.310
MODE	0.0	STD DEV	13.585	VARIANCE	184.544
KURTOSIS	1.623	SKEWNESS	0.646	RANGE	87.500
MINIMUM	0.0	MAXIMUM	87.500		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PCTEMPL EMPLOY AS A PERCENTAGE OF GRANDTOT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	13.	1	1	35	20.	1	1	70
1.	1	1	3	13.	1	1	36	20.	1	1	71
2.	1	1	4	13.	1	1	37	20.	1	1	72
4.	1	1	5	13.	2	2	39	21.	1	1	73
4.	1	1	6	13.	1	1	40	21.	1	1	74
5.	1	1	7	13.	1	1	41	21.	1	1	75
6.	1	1	8	14.	1	1	42	21.	1	1	75
6.	1	1	9	14.	1	1	43	21.	1	1	76
6.	1	1	10	14.	1	1	44	22.	1	1	77
6.	1	1	11	14.	1	1	45	22.	1	1	78
7.	1	1	12	15.	1	1	46	22.	1	1	79
7.	1	1	13	15.	1	1	47	22.	1	1	80
7.	1	1	14	15.	1	1	48	23.	1	1	81
8.	1	1	15	15.	1	1	49	24.	1	1	82
8.	1	1	16	15.	1	1	50	25.	1	1	83
8.	1	1	17	15.	1	1	51	25.	1	1	84
9.	1	1	18	16.	1	1	52	25.	1	1	85
10.	1	1	19	16.	1	1	53	26.	1	1	86
10.	1	1	20	16.	1	1	54	27.	1	1	87
10.	1	1	21	16.	1	1	55	27.	1	1	88
10.	1	1	22	16.	1	1	56	28.	1	1	89
10.	1	1	23	16.	1	1	57	29.	1	1	90
11.	1	1	24	17.	1	1	58	29.	1	1	91
11.	1	1	25	17.	1	1	59	29.	1	1	92
11.	1	1	25	17.	1	1	60	29.	1	1	93
11.	1	1	26	17.	1	1	61	30.	1	1	94
11.	1	1	27	17.	1	1	62	31.	1	1	95
11.	1	1	28	18.	1	1	63	33.	1	1	96
11.	1	1	29	18.	1	1	64	35.	1	1	97
12.	1	1	30	18.	1	1	65	35.	1	1	98
12.	1	1	31	18.	1	1	66	37.	1	1	99
12.	1	1	32	19.	1	1	67	46.	1	1	100
12.	1	1	33	19.	1	1	68				
12.	1	1	34	19.	1	1	69				

MEAN	16.396	STD ERR	0.846	MEDIAN	15.248
MODE	0.0	STD DEV	8.545	VARIANCE	73.011
KURTOSIS	0.588	SKEWNESS	0.649	RANGE	45.950
MINIMUM	0.0	MAXIMUM	45.950		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PCTGEN TOTGEN AS A PERCENT OF GRANDTOT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	11.	1	1	35	22.	1	1	69
1.	1	1	3	12.	1	1	36	23.	1	1	70
1.	1	1	4	12.	1	1	37	24.	1	1	71
2.	1	1	5	13.	1	1	38	24.	1	1	72
3.	1	1	6	13.	1	1	39	24.	1	1	73
3.	1	1	7	13.	1	1	40	26.	1	1	74
3.	1	1	8	13.	1	1	41	26.	1	1	75
4.	1	1	9	14.	1	1	42	27.	1	1	75
4.	1	1	10	14.	1	1	43	29.	1	1	76
4.	1	1	11	14.	1	1	44	29.	1	1	77
5.	1	1	12	15.	1	1	45	29.	1	1	78
6.	1	1	13	15.	1	1	46	31.	1	1	79
6.	1	1	14	15.	1	1	47	31.	1	1	80
6.	1	1	15	15.	1	1	48	31.	1	1	81
7.	1	1	16	15.	1	1	49	31.	1	1	82
7.	1	1	17	16.	1	1	50	32.	1	1	83
8.	1	1	18	16.	1	1	51	32.	1	1	84
8.	1	1	19	16.	1	1	52	32.	1	1	85
8.	1	1	20	17.	1	1	53	33.	1	1	86
8.	1	1	21	18.	1	1	54	34.	1	1	87
8.	1	1	22	18.	1	1	55	35.	1	1	88
9.	1	1	23	19.	1	1	56	36.	1	1	89
9.	1	1	24	19.	1	1	57	36.	1	1	90
9.	1	1	25	19.	1	1	58	37.	1	1	91
9.	1	1	25	19.	1	1	59	37.	1	1	92
10.	1	1	26	19.	1	1	60	37.	1	1	93
10.	1	1	27	20.	1	1	61	39.	1	1	94
10.	1	1	28	20.	1	1	62	39.	1	1	95
11.	1	1	29	20.	1	1	63	41.	1	1	96
11.	1	1	30	20.	1	1	64	41.	1	1	97
11.	1	1	31	20.	1	1	65	43.	1	1	98
11.	1	1	32	21.	1	1	66	43.	1	1	99
11.	1	1	33	22.	1	1	67	67.	1	1	100
11.	1	1	34	22.	1	1	68				

MEAN	18.650	STD ERR	1.216	MEDIAN	15.704
MODE	0.0	STD DEV	12.278	VARIANCE	150.737
KURTOSIS	0.975	SKEWNESS	0.878	RANGE	67.310
MINIMUM	0.0	MAXIMUM	67.310		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TOTEMP TOTAL EMPLOYEES

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	1	1	1	13.	2	2	52	26.	1	1	86
2.	3	3	4	14.	5	5	57	28.	1	1	88
3.	5	5	9	15.	2	2	59	29.	1	1	89
4.	4	4	14	16.	4	4	64	32.	3	3	92
5.	3	3	17	17.	2	2	66	33.	1	1	93
6.	5	5	22	18.	1	1	67	37.	2	2	95
7.	1	1	23	19.	3	3	70	38.	1	1	96
8.	12	13	35	21.	6	6	76	40.	1	1	97
10.	2	2	38	23.	3	3	79	59.	1	1	98
11.	4	4	42	24.	4	4	83	79.	1	1	99
12.	8	8	50	25.	2	2	85	85.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
100000.	6				

MEAN	16.385	STD ERR	1.444	MEDIAN	12.500
MODE	8.000	STD DEV	14.146	VARIANCE	200.113
KURTOSIS	8.221	SKEWNESS	2.453	RANGE	84.000
MINIMUM	1.000	MAXIMUM	85.000		

VALID CASES 96 MISSING CASES 6

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TOTHRS TOTAL SERVICE HOURS 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	20.	2	2	38	40.	1	1	71
1.	1	1	2	21.	1	1	39	40.	1	1	72
2.	1	1	3	22.	1	1	40	41.	1	1	73
2.	1	1	4	23.	1	1	41	42.	1	1	74
2.	1	1	5	23.	1	1	42	43.	1	1	75
3.	1	1	6	23.	1	1	43	44.	1	1	76
3.	1	1	8	23.	1	1	44	45.	1	1	77
3.	1	1	9	23.	1	1	45	47.	1	1	78
4.	1	1	10	24.	1	1	46	48.	1	1	80
4.	1	1	11	24.	1	1	47	49.	1	1	81
6.	1	1	12	25.	1	1	48	49.	1	1	82
6.	2	2	14	25.	1	1	49	49.	1	1	83
6.	1	1	15	26.	1	1	51	51.	1	1	84
6.	1	1	16	27.	1	1	52	52.	1	1	85
9.	1	1	17	27.	1	1	53	62.	1	1	86
9.	1	1	18	29.	1	1	54	64.	1	1	87
9.	1	1	19	29.	1	1	55	68.	1	1	88
9.	1	1	20	30.	1	1	56	70.	1	1	89
10.	1	1	22	30.	1	1	57	81.	1	1	90
11.	1	1	23	34.	1	1	58	81.	1	1	91
11.	1	1	24	34.	1	1	59	84.	1	1	92
12.	1	1	25	35.	1	1	60	86.	1	1	94
13.	1	1	26	35.	1	1	61	104.	1	1	95
13.	1	1	27	36.	1	1	62	131.	1	1	96
15.	1	1	28	37.	1	1	63	132.	1	1	97
15.	2	2	30	38.	1	1	65	157.	1	1	98
15.	1	1	31	38.	1	1	66	184.	1	1	99
17.	1	1	32	40.	1	1	67	201.	1	1	100
17.	2	2	34	40.	2	2	69				
20.	1	1	35	40.	1	1	70				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
100000.	9				

MEAN	36.318	STD ERR	3.888	MEDIAN	26.400
MODE	5.800	STD DEV	37.497	VARIANCE	1405.989
KURTOSIS	6.154	SKEWNESS	2.321	RANGE	201.000
MINIMUM	0.400	MAXIMUM	201.400		

VALID CASES 93 MISSING CASES 9

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TOTCMP TOTAL COMPENSATION $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
3.	1	1	1	70.	1	1	34	152.	1	1	68
4.	1	1	2	70.	1	1	35	154.	1	1	69
4.	1	1	3	78.	1	1	36	166.	1	1	70
5.	1	1	4	82.	1	1	38	170.	1	1	71
5.	1	1	5	90.	1	1	39	182.	1	1	72
9.	1	1	6	94.	1	1	40	208.	1	1	73
9.	1	1	7	96.	1	1	41	209.	1	1	74
13.	1	1	8	96.	1	1	42	212.	1	1	75
13.	1	1	9	97.	1	1	43	218.	1	1	76
13.	1	1	10	101.	1	1	44	222.	1	1	77
16.	1	1	11	101.	1	1	45	222.	1	1	78
19.	1	1	13	101.	1	1	46	224.	1	1	79
19.	1	1	14	103.	1	1	47	232.	1	1	80
22.	1	1	15	106.	1	1	48	238.	1	1	81
24.	1	1	16	106.	1	1	49	238.	1	1	82
29.	1	1	17	109.	1	1	50	250.	1	1	83
30.	1	1	18	111.	1	1	51	253.	1	1	84
33.	1	1	19	112.	1	1	52	265.	1	1	85
35.	1	1	20	114.	1	1	53	274.	1	1	86
37.	1	1	21	115.	1	1	54	291.	1	1	88
40.	1	1	22	122.	1	1	55	295.	1	1	89
44.	1	1	23	122.	1	1	56	302.	1	1	90
46.	1	1	24	127.	1	1	57	362.	1	1	91
47.	1	1	25	127.	1	1	58	363.	1	1	92
50.	1	1	26	129.	1	1	59	384.	1	1	93
53.	1	1	27	131.	1	1	60	414.	1	1	94
56.	1	1	28	132.	1	1	61	441.	1	1	95
60.	1	1	29	137.	1	1	63	489.	1	1	96
62.	1	1	30	137.	1	1	64	784.	1	1	97
65.	1	1	31	138.	1	1	65	797.	1	1	98
67.	1	1	32	139.	1	1	66	959.	1	1	99
69.	1	1	33	149.	1	1	67	1062.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
100000.	6				

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MEAN	162.202	STD ERR	19.319	MEDIAN	108.750
MODE	2.800	STD DEV	189.289	VARIANCE	35830.379
KURTOSIS	8.568	SKEWNESS	2.732	RANGE	1059.300
MINIMUM	2.800	MAXIMUM	1062.100		

VALID CASES	96	MISSING CASES	6

FILE RAIL4 (CREATION DATE = 06/17/76)

NUMLOCS NUMBER OF LOCOMOTIVES

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	33	33	33	3.	20	20	88	7.	1	1	99
2.	35	35	68	4.	10	10	98	8.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99.	2				

MEAN	2.180	STD ERR	0.123	MEDIAN	1.986
MODE	2.000	STD DEV	1.234	VARIANCE	1.523
KURTOSIS	5.145	SKEWNESS	1.752	RANGE	7.000
MINIMUM	1.000	MAXIMUM	8.000		

VALID CASES 100 MISSING CASES 2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TOTHP TOTAL HORSEPOWER ALL LOCOMOTIVES

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
224.	1	1	1	1000.	3	3	43	2100.	1	1	74
250.	1	1	2	1040.	1	1	44	2180.	1	1	75
300.	2	2	4	1060.	1	1	45	2350.	1	1	76
330.	1	1	5	1100.	1	1	46	2400.	3	3	79
380.	4	4	9	1140.	1	1	47	2410.	1	1	80
400.	2	2	11	1160.	1	1	48	2500.	1	1	81
420.	1	1	12	1180.	1	1	49	2520.	1	1	82
425.	1	1	13	1200.	4	4	53	2800.	2	2	84
470.	1	1	14	1300.	1	1	54	3000.	7	7	91
500.	4	4	18	1320.	3	3	57	3200.	2	2	93
600.	8	8	26	1380.	1	1	58	3500.	1	1	94
630.	1	1	27	1500.	3	3	61	3660.	1	1	95
660.	1	1	28	1560.	1	1	62	4200.	1	1	96
700.	2	2	30	1600.	1	1	63	4450.	1	1	97
760.	2	2	32	1620.	1	1	64	5300.	1	1	98
780.	2	2	34	1660.	1	1	65	5500.	1	1	99
800.	3	3	37	1800.	4	4	69	6400.	1	1	100
875.	1	1	38	1980.	1	1	70				
900.	2	2	40	2000.	3	3	73				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	2				

MEAN	1571.940	STD ERR	123.135	MEDIAN	1198.750
MODE	600.000	STD DEV	1231.354	VARIANCE	1516233.00
KURTOSIS	2.385	SKEWNESS	1.487	RANGE	6176.000
MINIMUM	224.000	MAXIMUM	6400.000		

VALID CASES 100 MISSING CASES 2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

STATE STATE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
AL	3	3	3	MD	1	1	36	OR	5	5	69
AR	10	10	13	ME	1	1	37	PA	7	7	75
AZ	1	1	14	MI	2	2	39	RI	2	2	77
CA	7	7	21	MN	2	2	41	SC	5	5	82
CO	2	2	23	MS	3	3	44	TN	1	1	83
GA	4	4	26	MT	1	1	45	TX	5	5	88
IL	1	1	27	NC	6	6	51	UT	1	1	89
IN	3	3	30	NH	2	2	53	VA	2	2	91
KA	1	1	31	NJ	2	2	55	VT	2	2	93
KY	3	3	34	NY	7	7	62	WI	1	1	94
MA	1	1	35	OK	2	2	64	WV	6	6	100

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TERRTY TERRITORY

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	38	37	37	2.	25	25	62	3.	39	38	100

MEAN	2.010	STD ERR	0.086	MEDIAN	2.020
MODE	3.000	STD DEV	0.873	VARIANCE	0.762
KURTOSIS	-1.688	SKEWNESS	-0.019	RANGE	2.000
MINIMUM	1.000	MAXIMUM	3.000		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

NUMCONNS NUMBER OF CONNECTING CARRIERS

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	74	73	73	3.	9	9	97	5.	1	1	100
2.	16	16	88	4.	2	2	99				

MEAN	1.431	STD ERR	0.081	MEDIAN	1.189
MODE	1.000	STD DEV	0.815	VARIANCE	0.664
KURTOSIS	3.925	SKEWNESS	2.035	RANGE	4.000
MINIMUM	1.000	MAXIMUM	5.000		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

OWNRSHP OWNERSHIP TYPE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	40	39	39	1.	57	56	95	2.	5	5	100

MEAN	0.657	STD ERR	0.057	MEDIAN	0.693
MODE	1.000	STD DEV	0.572	VARIANCE	0.327
KURTOSIS	-0.726	SKEWNESS	0.163	RANGE	2.000
MINIMUM	0.0	MAXIMUM	2.000		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTOTMOWS TOTMOWS IN $000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	3.	1	1	34	6.	1	1	68
0.	1	1	2	3.	1	1	35	6.	1	1	69
0.	1	1	3	3.	1	1	36	6.	1	1	70
0.	1	1	4	3.	1	1	37	6.	1	1	71
0.	1	1	5	3.	1	1	38	7.	1	1	72
1.	1	1	6	4.	1	1	39	7.	1	1	73
1.	1	1	7	4.	1	1	40	7.	1	1	74
1.	1	1	8	4.	1	1	41	7.	1	1	75
1.	1	1	9	4.	1	1	42	8.	1	1	76
1.	1	1	10	4.	1	1	43	8.	1	1	77
1.	1	1	11	4.	1	1	44	8.	1	1	78
1.	1	1	12	4.	1	1	45	9.	1	1	79
2.	1	1	13	4.	1	1	46	9.	1	1	80
2.	1	1	14	4.	1	1	47	9.	1	1	81
2.	1	1	15	4.	1	1	48	9.	1	1	82
2.	1	1	16	4.	1	1	49	10.	1	1	83
2.	1	1	17	5.	1	1	50	10.	1	1	84
2.	1	1	18	5.	1	1	51	10.	1	1	85
2.	1	1	19	5.	1	1	52	10.	1	1	86
2.	1	1	20	5.	1	1	53	10.	1	1	87
2.	1	1	21	5.	1	1	54	11.	1	1	88
2.	1	1	22	5.	1	1	55	11.	1	1	89
2.	1	1	23	5.	1	1	56	11.	1	1	90
2.	1	1	24	5.	1	1	57	14.	1	1	91
3.	1	1	25	5.	1	1	58	15.	1	1	92
3.	1	1	26	5.	2	2	60	15.	1	1	93
3.	1	1	27	5.	1	1	61	19.	1	1	94
3.	1	1	28	5.	1	1	62	21.	1	1	95
3.	1	1	29	5.	1	1	63	21.	1	1	96
3.	1	1	30	6.	1	1	64	22.	1	1	97
3.	1	1	31	6.	1	1	65	24.	1	1	98
3.	1	1	32	6.	1	1	66	33.	1	1	99
3.	1	1	33	6.	1	1	67	37.	1	1	100

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	2				

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MEAN	6.246	STD ERR	0.636	MEDIAN	4.641
MODE	5.100	STD DEV	6.359	VARIANCE	40.440
KURTOSIS	7.941	SKEWNESS	2.579	RANGE	37.400
MINIMUM	0.0	MAXIMUM	37.400		

VALID CASES	100	MISSING CASES	2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTOTMOE TOTMOE IN $000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	3	3	3	1.	1	1	36	4.	1	1	70
0.	1	1	4	1.	1	1	37	4.	1	1	71
0.	1	1	5	1.	1	1	38	4.	1	1	72
0.	1	1	6	1.	1	1	39	4.	1	1	73
0.	1	1	7	1.	1	1	40	4.	1	1	74
0.	1	1	8	1.	1	1	41	4.	1	1	75
0.	1	1	9	1.	1	1	42	4.	1	1	76
0.	1	1	10	1.	1	1	43	4.	1	1	77
0.	1	1	11	1.	1	1	44	4.	1	1	78
0.	1	1	12	1.	1	1	45	4.	1	1	79
0.	1	1	13	1.	1	1	46	4.	1	1	80
0.	1	1	14	1.	1	1	47	4.	1	1	81
0.	1	1	15	2.	1	1	48	5.	1	1	82
0.	1	1	16	2.	1	1	49	5.	1	1	83
0.	1	1	17	2.	1	1	50	5.	1	1	84
0.	1	1	18	2.	1	1	51	5.	1	1	85
1.	1	1	19	2.	1	1	52	6.	1	1	86
1.	1	1	20	2.	1	1	53	6.	1	1	87
1.	1	1	21	2.	1	1	54	7.	1	1	88
1.	1	1	22	3.	1	1	55	7.	1	1	89
1.	1	1	23	3.	1	1	56	8.	1	1	90
1.	1	1	24	3.	2	2	58	8.	1	1	91
1.	1	1	25	3.	1	1	59	10.	1	1	92
1.	1	1	26	3.	1	1	60	10.	1	1	93
1.	1	1	27	3.	1	1	61	12.	1	1	94
1.	1	1	28	3.	1	1	62	12.	1	1	95
1.	1	1	29	3.	1	1	63	13.	1	1	96
1.	1	1	30	3.	1	1	64	17.	1	1	97
1.	1	1	31	3.	1	1	65	19.	1	1	98
1.	1	1	32	3.	1	1	66	33.	1	1	99
1.	1	1	33	3.	1	1	67	59.	1	1	100
1.	1	1	34	4.	1	1	68				
1.	1	1	35	4.	1	1	69				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	2				

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MEAN	3.853	STD ERR	0.727	MEDIAN	1.890
MODE	0.0	STD DEV	7.271	VARIANCE	52.864
KURTOSIS	34.400	SKEWNESS	5.336	RANGE	59.375
MINIMUM	0.0	MAXIMUM	59.375		

VALID CASES 100 MISSING CASES 2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTRAFFIC TRAFFIC IN $000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	11	11	11	0.	1	1	42	1.	1	1	71
0.	1	1	12	0.	1	1	43	1.	1	1	72
0.	1	1	13	0.	1	1	44	1.	1	1	73
0.	1	1	14	0.	1	1	45	1.	1	1	74
0.	1	1	15	0.	1	1	46	1.	1	1	75
0.	1	1	16	0.	1	1	47	1.	1	1	76
0.	1	1	17	0.	1	1	48	1.	1	1	77
0.	1	1	18	0.	1	1	49	1.	1	1	78
0.	2	2	20	0.	1	1	50	1.	1	1	79
0.	1	1	21	0.	1	1	51	1.	1	1	80
0.	1	1	22	0.	1	1	52	1.	2	2	82
0.	1	1	23	0.	1	1	53	1.	1	1	83
0.	1	1	24	0.	1	1	54	1.	1	1	84
0.	2	2	26	0.	1	1	55	1.	1	1	85
0.	1	1	27	0.	1	1	56	1.	1	1	86
0.	1	1	28	0.	1	1	57	1.	1	1	87
0.	1	1	29	0.	1	1	58	1.	1	1	88
0.	1	1	30	0.	1	1	59	1.	1	1	89
0.	1	1	31	0.	1	1	60	1.	1	1	90
0.	1	1	32	0.	1	1	61	2.	1	1	91
0.	1	1	33	0.	1	1	62	2.	1	1	92
0.	1	1	34	0.	1	1	63	2.	1	1	93
0.	1	1	35	0.	1	1	64	2.	1	1	94
0.	1	1	36	1.	1	1	65	2.	1	1	95
0.	1	1	37	1.	1	1	66	2.	1	1	96
0.	1	1	38	1.	1	1	67	2.	1	1	97
0.	1	1	39	1.	1	1	68	2.	1	1	98
0.	1	1	40	1.	1	1	69	4.	1	1	99
0.	1	1	41	1.	1	1	70	9.	1	1	100

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	2				

MEAN	0.607	STD ERR	0.106	MEDIAN	0.319
MODE	0.0	STD DEV	1.058	VARIANCE	1.118
KURTOSIS	37.461	SKEWNESS	5.406	RANGE	8.950
MINIMUM	0.0	MAXIMUM	8.950		

VALID CASES 100 MISSING CASES 2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTOTRANS TOTTRANS IN $000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	3.	1	1	35	8.	1	1	68
0.	1	1	2	3.	1	1	36	9.	1	1	69
0.	1	1	3	3.	1	1	37	9.	1	1	70
1.	1	1	4	3.	1	1	38	9.	1	1	71
1.	1	1	5	3.	1	1	39	10.	1	1	72
1.	1	1	6	3.	1	1	40	10.	1	1	73
1.	1	1	7	3.	1	1	41	11.	1	1	74
1.	1	1	8	3.	1	1	42	11.	1	1	75
1.	1	1	9	3.	1	1	43	11.	1	1	76
1.	1	1	10	3.	1	1	44	11.	1	1	77
1.	1	1	11	4.	1	1	45	11.	1	1	78
1.	1	1	12	4.	1	1	46	11.	1	1	79
2.	1	1	13	4.	1	1	47	11.	1	1	80
2.	1	1	14	4.	1	1	48	11.	1	1	81
2.	1	1	15	4.	1	1	49	12.	1	1	82
2.	1	1	16	4.	1	1	50	12.	1	1	83
2.	1	1	17	4.	1	1	51	13.	1	1	84
2.	1	1	18	4.	1	1	52	14.	1	1	85
2.	2	2	20	4.	1	1	53	16.	1	1	86
2.	1	1	21	4.	1	1	54	16.	2	2	88
2.	1	1	22	5.	1	1	55	16.	1	1	89
2.	1	1	23	5.	1	1	56	16.	1	1	90
2.	1	1	24	5.	1	1	57	18.	1	1	91
2.	1	1	25	5.	1	1	58	19.	1	1	92
3.	1	1	26	5.	1	1	59	21.	1	1	93
3.	1	1	27	5.	1	1	60	24.	1	1	94
3.	1	1	28	5.	1	1	61	25.	1	1	95
3.	1	1	29	5.	1	1	62	29.	1	1	96
3.	1	1	30	6.	1	1	63	36.	1	1	97
3.	1	1	31	6.	1	1	64	54.	1	1	98
3.	1	1	32	6.	1	1	65	110.	1	1	99
3.	1	1	33	7.	1	1	66	151.	1	1	100
3.	1	1	34	7.	1	1	67				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	2				

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MEAN	9.615	STD ERR	1.941	MEDIAN	4.091
MODE	2.020	STD DEV	19.414	VARIANCE	376.904
KURTOSIS	33.230	SKEWNESS	5.467	RANGE	151.200
MINIMUM	0.0	MAXIMUM	151.200		

VALID CASES 100 MISSING CASES 2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTOTGEN TOTGEN IN $000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	1.	1	1	35	5.	1	1	68
0.	1	1	3	2.	1	1	36	5.	1	1	69
0.	1	1	4	2.	1	1	37	5.	1	1	70
0.	1	1	5	2.	1	1	38	5.	1	1	71
0.	1	1	6	2.	1	1	39	5.	1	1	72
0.	1	1	7	2.	1	1	40	5.	1	1	73
0.	1	1	8	2.	1	1	41	6.	1	1	74
0.	1	1	9	2.	1	1	42	6.	1	1	75
0.	1	1	10	2.	1	1	43	6.	1	1	76
0.	1	1	11	2.	1	1	44	6.	1	1	77
0.	1	1	12	2.	1	1	45	7.	1	1	78
1.	1	1	13	2.	1	1	46	7.	1	1	79
1.	1	1	14	2.	1	1	47	7.	1	1	80
1.	1	1	15	2.	1	1	48	7.	1	1	81
1.	1	1	16	2.	1	1	49	7.	1	1	82
1.	1	1	17	2.	1	1	50	7.	1	1	83
1.	1	1	18	2.	1	1	51	8.	1	1	84
1.	1	1	19	3.	1	1	52	8.	1	1	85
1.	1	1	20	3.	1	1	53	8.	1	1	86
1.	1	1	21	3.	1	1	54	8.	1	1	87
1.	1	1	22	3.	1	1	55	9.	2	2	89
1.	1	1	23	3.	1	1	56	9.	1	1	90
1.	1	1	24	3.	1	1	57	9.	1	1	91
1.	1	1	25	3.	1	1	58	11.	1	1	92
1.	1	1	26	3.	1	1	59	12.	1	1	93
1.	1	1	27	4.	1	1	60	13.	1	1	94
1.	1	1	28	4.	1	1	61	14.	1	1	95
1.	1	1	29	4.	1	1	62	14.	1	1	96
1.	1	1	30	4.	1	1	63	15.	1	1	97
1.	1	1	31	4.	1	1	64	15.	1	1	98
1.	1	1	32	5.	1	1	65	19.	1	1	99
1.	1	1	33	5.	1	1	66	21.	1	1	100
1.	1	1	34	5.	1	1	67				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	2				

MEAN	4.087	STD ERR	0.430	MEDIAN	2.160
MODE	0.0	STD DEV	4.300	VARIANCE	18.488
KURTOSIS	2.625	SKEWNESS	1.637	RANGE	20.950
MINIMUM	0.0	MAXIMUM	20.950		

VALID CASES	100	MISSING CASES	2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XGRNDTOT GRANDTOT IN $000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	9.	1	1	35	25.	1	1	69
1.	1	1	2	10.	1	1	36	25.	1	1	70
2.	1	1	3	10.	1	1	37	26.	1	1	71
2.	1	1	4	11.	1	1	38	26.	1	1	72
2.	1	1	5	11.	1	1	39	26.	1	1	73
3.	1	1	6	12.	1	1	40	26.	1	1	74
4.	1	1	7	12.	1	1	41	28.	1	1	75
4.	1	1	8	12.	1	1	42	29.	1	1	76
4.	1	1	9	12.	1	1	43	29.	1	1	77
4.	1	1	10	13.	1	1	44	30.	1	1	78
5.	1	1	11	13.	1	1	45	32.	1	1	79
5.	1	1	12	13.	1	1	46	32.	1	1	80
5.	1	1	13	14.	1	1	47	32.	1	1	81
5.	1	1	14	14.	1	1	48	33.	1	1	82
6.	1	1	15	14.	1	1	49	37.	1	1	83
6.	1	1	16	14.	1	1	50	39.	1	1	84
6.	1	1	17	14.	1	1	51	39.	1	1	85
7.	1	1	18	15.	1	1	52	41.	1	1	86
7.	1	1	19	15.	1	1	53	42.	1	1	87
7.	1	1	20	15.	1	1	54	44.	1	1	88
7.	1	1	21	17.	1	1	55	46.	1	1	89
7.	1	1	22	18.	1	1	56	49.	1	1	90
8.	1	1	23	19.	1	1	57	52.	1	1	91
8.	1	1	24	20.	1	1	58	53.	1	1	92
8.	1	1	25	20.	1	1	59	54.	1	1	93
8.	1	1	26	21.	1	1	60	57.	1	1	94
8.	1	1	27	21.	1	1	61	57.	1	1	95
9.	1	1	28	21.	1	1	62	62.	1	1	96
9.	1	1	29	21.	1	1	63	65.	1	1	97
9.	1	1	30	22.	1	1	64	107.	1	1	98
9.	1	1	31	22.	1	1	65	181.	1	1	99
9.	1	1	32	24.	1	1	66	270.	1	1	100
9.	1	1	33	24.	1	1	67				
9.	1	1	34	25.	1	1	68				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	2				

FILE RAIL4 (CREATION DATE = 06/17/76)

MEAN	24.440	STD ERR	3.439	MEDIAN	14.114
MODE	0.0	STD DEV	34.391	VARIANCE	1182.721
KURTOSIS	27.987	SKEWNESS	4.777	RANGE	269.800
MINIMUM	0.0	MAXIMUM	269.800		

VALID CASES	100	MISSING CASES	2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTIESREP NUMBER OF TIES REPLACED PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	8	9	9	45.	1	1	40	129.	1	1	71
1.	1	1	10	45.	1	1	41	142.	1	1	72
3.	1	1	11	50.	1	1	43	155.	1	1	73
3.	1	1	12	57.	1	1	44	160.	1	1	74
4.	1	1	13	61.	1	1	45	162.	1	1	76
7.	1	1	14	62.	1	1	46	162.	1	1	77
8.	1	1	15	63.	1	1	47	167.	1	1	78
12.	1	1	16	64.	1	1	48	169.	1	1	79
14.	1	1	17	67.	1	1	49	171.	1	1	80
16.	1	1	18	69.	1	1	50	179.	1	1	81
16.	1	1	19	71.	1	1	51	186.	1	1	82
16.	1	1	20	78.	1	1	52	190.	1	1	83
18.	2	2	22	80.	2	2	54	198.	1	1	84
22.	1	1	23	82.	1	1	55	207.	1	1	85
22.	1	1	24	87.	1	1	56	210.	1	1	86
24.	1	1	26	87.	1	1	57	213.	1	1	87
28.	1	1	27	88.	1	1	59	217.	1	1	88
32.	1	1	28	88.	1	1	60	218.	1	1	89
33.	1	1	29	90.	1	1	61	221.	1	1	90
33.	2	2	31	91.	1	1	62	230.	1	1	91
34.	1	1	32	101.	1	1	63	235.	1	1	93
36.	1	1	33	111.	1	1	64	236.	1	1	94
36.	1	1	34	111.	1	1	65	263.	1	1	95
37.	1	1	35	115.	1	1	66	275.	1	1	96
38.	1	1	36	120.	1	1	67	290.	1	1	97
43.	1	1	37	128.	1	1	68	311.	1	1	98
44.	1	1	38	128.	1	1	69	362.	1	1	99
44.	1	1	39	129.	1	1	70	585.	1	1	100

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	8				

MEAN	99.571	STD ERR	10.243	MEDIAN	68.621
MODE	0.0	STD DEV	99.308	VARIANCE	9862.137
KURTOSIS	4.709	SKEWNESS	1.725	RANGE	585.250
MINIMUM	0.0	MAXIMUM	585.250		

VALID CASES 94 MISSING CASES 8

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XEXECEMP NUMBER OF EXEC-OFFS-ASSTS PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	13	14	14	0.	1	1	37	0.	1	1	68
0.	1	1	15	0.	1	1	38	0.	2	2	71
0.	1	1	16	0.	1	1	39	0.	1	1	72
0.	1	1	17	0.	1	1	40	0.	3	3	75
0.	1	1	18	0.	5	5	46	0.	4	4	79
0.	1	1	20	0.	1	1	47	0.	1	1	80
0.	1	1	21	0.	3	3	50	0.	3	3	84
0.	2	2	23	0.	1	1	51	0.	1	1	85
0.	1	1	24	0.	1	1	52	1.	2	2	87
0.	1	1	25	0.	1	1	53	1.	1	1	88
0.	1	1	26	0.	1	1	54	1.	1	1	89
0.	1	1	27	0.	1	1	55	1.	1	1	90
0.	1	1	28	0.	3	3	59	1.	1	1	91
0.	2	2	30	0.	1	1	60	1.	5	5	97
0.	4	4	35	0.	3	3	63	1.	3	3	100
0.	1	1	36	0.	4	4	67				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	10				

MEAN	0.264	STD ERR	0.033	MEDIAN	0.143
MODE	0.0	STD DEV	0.318	VARIANCE	0.101
KURTOSIS	3.080	SKEWNESS	1.908	RANGE	1.333
MINIMUM	0.0	MAXIMUM	1.333		

VALID CASES 92 MISSING CASES 10

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XNONOPEM TOTAL NONOPERATING EMPLOYEES PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	1.	1	1	29	1.	1	1	71
0.	1	1	2	1.	1	1	31	1.	1	1	72
0.	1	1	3	1.	1	1	32	1.	1	1	73
0.	1	1	4	1.	1	1	33	1.	1	1	74
0.	1	1	5	1.	1	1	34	2.	1	1	75
0.	1	1	6	1.	1	1	35	2.	1	1	76
0.	1	1	7	1.	3	3	38	2.	2	2	78
0.	1	1	8	1.	4	4	42	2.	1	1	79
0.	1	1	9	1.	1	1	43	2.	1	1	80
0.	2	2	12	1.	1	1	44	2.	2	2	82
0.	1	1	13	1.	1	1	45	2.	1	1	83
0.	1	1	14	1.	2	2	47	2.	1	1	84
0.	1	1	15	1.	1	1	48	2.	2	2	86
0.	1	1	16	1.	1	1	49	2.	1	1	87
0.	1	1	17	1.	1	1	51	2.	1	1	88
0.	1	1	18	1.	1	1	52	3.	4	4	93
0.	1	1	19	1.	1	1	53	3.	1	1	94
0.	1	1	20	1.	3	3	56	3.	1	1	95
0.	1	1	21	1.	8	8	64	3.	2	2	97
0.	1	1	22	1.	1	1	65	4.	1	1	98
0.	1	1	23	1.	1	1	66	8.	1	1	99
0.	1	1	24	1.	1	1	67	14.	1	1	100
1.	4	4	28	1.	2	2	69				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	7				

MEAN	1.259	STD ERR	0.170	MEDIAN	0.778
MODE	1.000	STD DEV	1.657	VARIANCE	2.747
KURTOSIS	31.714	SKEWNESS	5.038	RANGE	13.500
MINIMUM	0.0	MAXIMUM	13.500		

VALID CASES 95 MISSING CASES 7

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XOPEREMP TRAIN AND ENGINE EMPLOYEES PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	5	5	5	0.	1	1	31	0.	2	2	69
0.	2	2	7	0.	2	2	33	0.	1	1	70
0.	1	1	9	0.	2	2	35	1.	6	6	77
0.	1	1	10	0.	1	1	36	1.	1	1	78
0.	1	1	11	0.	6	6	43	1.	2	2	80
0.	1	1	12	0.	1	1	44	1.	1	1	81
0.	1	1	13	0.	1	1	45	1.	1	1	82
0.	1	1	14	0.	3	3	48	1.	2	2	84
0.	2	2	16	0.	2	2	50	1.	1	1	85
0.	4	4	20	0.	1	1	51	1.	5	5	90
0.	1	1	21	0.	3	3	54	1.	1	1	91
0.	1	1	22	0.	1	1	55	2.	1	1	93
0.	1	1	23	0.	3	3	59	2.	3	3	96
0.	2	2	26	0.	1	1	60	2.	1	1	97
0.	1	1	27	0.	2	2	62	3.	1	1	98
0.	1	1	28	0.	4	4	66	4.	1	1	99
0.	2	2	30	0.	1	1	67	8.	1	1	100

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	8				

MEAN	0.562	STD ERR	0.103	MEDIAN	0.228
MODE	0.200	STD DEV	1.002	VARIANCE	1.004
KURTOSIS	28.317	SKEWNESS	4.829	RANGE	7.750
MINIMUM	0.0	MAXIMUM	7.750		

VALID CASES 94 MISSING CASES 8

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTOTEMP TOTAL NUMBER OF EMPLOYEES PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	1.	1	1	31	2.	1	1	68
0.	1	1	2	1.	1	1	32	2.	1	1	69
0.	1	1	3	1.	4	4	36	2.	1	1	70
0.	1	1	4	1.	1	1	37	2.	1	1	71
0.	1	1	5	1.	1	1	38	2.	1	1	72
0.	2	2	7	1.	1	1	39	2.	1	1	73
0.	1	1	9	1.	1	1	40	2.	2	2	76
0.	1	1	10	1.	1	1	41	2.	1	1	77
0.	1	1	11	1.	3	3	45	2.	1	1	78
0.	1	1	12	1.	1	1	46	3.	1	1	79
0.	1	1	13	1.	1	1	47	3.	1	1	80
1.	1	1	14	1.	5	5	52	3.	1	1	81
1.	1	1	15	1.	1	1	53	3.	6	6	87
1.	1	1	16	1.	1	1	54	3.	1	1	88
1.	1	1	17	1.	1	1	55	4.	1	1	89
1.	1	1	18	1.	1	1	56	4.	1	1	90
1.	1	1	19	1.	1	1	57	4.	1	1	91
1.	2	2	21	1.	1	1	59	4.	3	3	95
1.	1	1	22	1.	1	1	60	5.	1	1	96
1.	2	2	24	1.	1	1	61	5.	1	1	97
1.	1	1	26	1.	1	1	62	6.	1	1	98
1.	1	1	27	1.	2	2	64	12.	1	1	99
1.	2	2	29	2.	2	2	66	21.	1	1	100
1.	1	1	30	2.	1	1	67				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	8				

MEAN	1.810	STD ERR	0.269	MEDIAN	1.000
MODE	3.000	STD DEV	2.604	VARIANCE	6.781
KURTOSIS	33.407	SKEWNESS	5.236	RANGE	21.083
MINIMUM	0.167	MAXIMUM	21.250		

VALID CASES 94 MISSING CASES 8

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTOTHRS TOTAL HRS OF SVC IN 000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	1.	1	1	35	3.	1	1	69
0.	1	1	2	1.	1	1	36	3.	1	1	70
0.	1	1	3	1.	1	1	37	4.	1	1	71
0.	1	1	4	1.	1	1	38	4.	1	1	73
0.	1	1	5	1.	1	1	40	4.	1	1	74
0.	1	1	7	2.	1	1	41	4.	1	1	75
1.	1	1	8	2.	1	1	42	4.	1	1	76
1.	1	1	9	2.	1	1	43	4.	1	1	77
1.	1	1	10	2.	1	1	44	4.	1	1	78
1.	1	1	11	2.	1	1	45	5.	1	1	79
1.	1	1	12	2.	1	1	46	5.	1	1	80
1.	1	1	13	2.	1	1	47	5.	1	1	81
1.	1	1	14	2.	1	1	48	5.	1	1	82
1.	1	1	15	2.	1	1	49	6.	1	1	84
1.	1	1	16	2.	1	1	51	6.	1	1	85
1.	1	1	18	2.	1	1	52	6.	1	1	86
1.	1	1	19	2.	1	1	53	7.	1	1	87
1.	1	1	20	2.	1	1	54	7.	1	1	88
1.	1	1	21	2.	1	1	55	7.	1	1	89
1.	1	1	22	2.	1	1	56	8.	1	1	90
1.	1	1	23	3.	1	1	57	8.	1	1	91
1.	1	1	24	3.	1	1	58	10.	1	1	92
1.	1	1	25	3.	1	1	59	10.	1	1	93
1.	1	1	26	3.	1	1	60	10.	1	1	95
1.	1	1	27	3.	1	1	62	10.	1	1	96
1.	1	1	29	3.	1	1	63	10.	1	1	97
1.	1	1	30	3.	1	1	64	12.	1	1	98
1.	1	1	31	3.	1	1	65	44.	1	1	99
1.	1	1	32	3.	1	1	66	46.	1	1	100
1.	1	1	33	3.	1	1	67				
1.	1	1	34	3.	1	1	68				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	11				

MEAN	3.873	STD ERR	0.707	MEDIAN	1.964
MODE	0.158	STD DEV	6.743	VARIANCE	45.464
KURTOSIS	27.505	SKEWNESS	5.025	RANGE	45.792
MINIMUM	0.158	MAXIMUM	45.950		

VALID CASES 91 MISSING CASES 11

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTOTCMP TOTAL COMPENSATION IN $000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	5.	1	1	35	16.	1	1	69
1.	1	1	2	5.	1	1	36	17.	1	1	70
1.	1	1	3	6.	1	1	37	17.	1	1	71
1.	1	1	4	6.	1	1	38	18.	1	1	72
1.	1	1	5	6.	1	1	39	18.	1	1	73
2.	1	1	6	6.	1	1	40	19.	1	1	74
2.	1	1	7	6.	1	1	41	19.	1	1	76
2.	1	1	9	7.	1	1	43	19.	1	1	77
2.	1	1	10	7.	1	1	44	19.	1	1	78
2.	1	1	11	7.	1	1	45	19.	1	1	79
2.	1	1	12	7.	1	1	46	20.	1	1	80
2.	1	1	13	8.	1	1	47	20.	1	1	81
3.	1	1	14	8.	1	1	48	22.	1	1	82
3.	1	1	15	8.	1	1	49	22.	1	1	83
3.	1	1	16	8.	1	1	50	22.	1	1	84
3.	1	1	17	8.	1	1	51	23.	1	1	85
3.	1	1	18	9.	1	1	52	27.	1	1	86
4.	1	1	19	9.	1	1	53	27.	1	1	87
4.	1	1	20	9.	1	1	54	32.	1	1	88
4.	1	1	21	10.	1	1	55	34.	1	1	89
4.	1	1	22	11.	1	1	56	34.	1	1	90
4.	1	1	23	11.	1	1	57	35.	1	1	91
4.	1	1	24	12.	1	1	59	36.	1	1	93
4.	1	1	26	12.	1	1	60	38.	1	1	94
4.	1	1	27	12.	1	1	61	40.	1	1	95
5.	1	1	28	12.	1	1	62	42.	1	1	96
5.	1	1	29	12.	1	1	63	44.	1	1	97
5.	1	1	30	13.	1	1	64	59.	1	1	98
5.	1	1	31	14.	1	1	65	266.	1	1	99
5.	1	1	32	14.	1	1	66	266.	1	1	100
5.	1	1	33	15.	1	1	67				
5.	1	1	34	16.	1	1	68				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	8				

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MEAN	17.977	STD ERR	3.972	MEDIAN	8.066
MODE	0.392	STD DEV	38.507	VARIANCE	1482.816
KURTOSIS	33.832	SKEWNESS	5.723	RANGE	265.375
MINIMUM	0.392	MAXIMUM	265.767		

VALID CASES	94	MISSING CASES	8

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XMLSTRAN TOTAL TRAIN MILES IN 000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	0.	1	1	35	1.	1	1	72
0.	1	1	3	0.	1	1	36	1.	1	1	73
0.	1	1	4	0.	1	1	37	1.	1	1	74
0.	1	1	5	0.	1	1	38	1.	1	1	76
0.	1	1	6	0.	1	1	39	1.	1	1	77
0.	1	1	7	0.	1	1	40	1.	1	1	78
0.	1	1	9	0.	1	1	41	1.	1	1	79
0.	1	1	10	0.	1	1	43	1.	1	1	80
0.	1	1	11	0.	1	1	44	1.	1	1	81
0.	1	1	12	1.	4	4	48	1.	1	1	82
0.	1	1	13	1.	1	1	49	1.	2	2	84
0.	1	1	14	1.	1	1	50	1.	1	1	85
0.	1	1	15	1.	1	1	51	1.	1	1	86
0.	1	1	16	1.	1	1	52	1.	1	1	87
0.	1	1	17	1.	1	1	53	1.	1	1	88
0.	1	1	18	1.	1	1	54	1.	1	1	89
0.	1	1	19	1.	1	1	55	1.	1	1	90
0.	2	2	21	1.	1	1	56	1.	1	1	91
0.	1	1	22	1.	1	1	57	1.	1	1	93
0.	1	1	23	1.	2	2	60	1.	1	1	94
0.	1	1	24	1.	3	3	63	2.	1	1	95
0.	1	1	26	1.	1	1	64	2.	1	1	96
0.	1	1	27	1.	1	1	65	2.	1	1	97
0.	3	3	30	1.	2	2	67	2.	1	1	98
0.	1	1	31	1.	1	1	68	4.	1	1	99
0.	1	1	32	1.	1	1	69	5.	1	1	100
0.	1	1	33	1.	1	1	70				
0.	1	1	34	1.	1	1	71				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	8				

MEAN	0.677	STD ERR	0.073	MEDIAN	0.507
MODE	0.500	STD DEV	0.712	VARIANCE	0.507
KURTOSIS	15.857	SKEWNESS	3.624	RANGE	4.633
MINIMUM	0.0	MAXIMUM	4.633		

VALID CASES 94   MISSING CASES 8

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XCRMLTOT TOTAL CAR MILES IN 000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	2.	1	1	34	5.	1	1	68
0.	1	1	2	2.	1	1	35	5.	1	1	69
0.	1	1	3	2.	1	1	36	5.	1	1	70
0.	1	1	4	2.	1	1	38	5.	1	1	71
0.	1	1	5	2.	1	1	39	5.	1	1	72
0.	1	1	6	2.	1	1	40	5.	1	1	73
0.	1	1	7	2.	1	1	41	5.	1	1	74
0.	1	1	8	2.	1	1	42	6.	1	1	75
0.	1	1	9	2.	1	1	43	6.	1	1	76
0.	1	1	10	2.	1	1	44	6.	1	1	77
0.	1	1	11	2.	1	1	45	6.	1	1	78
0.	1	1	13	2.	1	1	46	6.	1	1	79
0.	1	1	14	2.	1	1	47	6.	1	1	80
1.	1	1	15	2.	1	1	48	7.	1	1	81
1.	1	1	16	2.	1	1	49	7.	1	1	82
1.	1	1	17	2.	1	1	50	7.	1	1	83
1.	1	1	18	3.	1	1	51	8.	1	1	84
1.	1	1	19	3.	1	1	52	9.	1	1	85
1.	1	1	20	3.	1	1	53	10.	1	1	86
1.	1	1	21	3.	1	1	54	11.	1	1	88
1.	1	1	22	3.	1	1	55	11.	1	1	89
1.	1	1	23	3.	1	1	56	12.	1	1	90
1.	1	1	24	3.	1	1	57	12.	1	1	91
1.	1	1	25	3.	1	1	58	13.	1	1	92
1.	1	1	26	4.	1	1	59	14.	1	1	93
1.	1	1	27	4.	1	1	60	15.	1	1	94
1.	1	1	28	4.	1	1	61	15.	1	1	95
1.	1	1	29	4.	1	1	63	16.	1	1	96
1.	1	1	30	5.	1	1	64	22.	1	1	97
1.	1	1	31	5.	1	1	65	23.	1	1	98
1.	1	1	32	5.	1	1	66	25.	1	1	99
1.	1	1	33	5.	1	1	67	44.	1	1	100

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	6				

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MEAN	4.817	STD ERR	0.666	MEDIAN	2.430
MODE	0.0	STD DEV	6.522	VARIANCE	42.532
KURTOSIS	12.855	SKEWNESS	3.127	RANGE	43.600
MINIMUM	0.0	MAXIMUM	43.600		

VALID CASES	96	MISSING CASES	6

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTONSTOT TOT TONS REV-NONREV FRT IN 000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	6.	1	1	36	18.	1	1	68
1.	2	2	3	7.	1	1	37	19.	2	2	70
1.	1	1	4	7.	1	1	38	22.	1	1	71
1.	1	1	5	7.	1	1	40	22.	1	1	73
1.	1	1	7	7.	1	1	41	23.	1	1	74
1.	2	2	9	8.	1	1	42	24.	1	1	75
2.	1	1	10	8.	1	1	43	25.	1	1	76
2.	1	1	11	8.	1	1	44	26.	1	1	77
2.	1	1	12	8.	1	1	45	29.	1	1	78
2.	1	1	13	8.	1	1	46	31.	1	1	79
2.	1	1	14	8.	1	1	47	31.	1	1	80
3.	1	1	15	9.	1	1	48	33.	1	1	81
3.	1	1	16	9.	1	1	49	34.	1	1	82
3.	1	1	18	9.	1	1	51	36.	1	1	84
3.	1	1	19	9.	1	1	52	36.	1	1	85
4.	1	1	20	9.	1	1	53	40.	1	1	86
4.	1	1	21	11.	1	1	54	40.	1	1	87
4.	1	1	22	11.	1	1	55	43.	1	1	88
5.	1	1	23	11.	1	1	56	49.	1	1	89
5.	1	1	24	12.	1	1	57	53.	1	1	90
5.	1	1	25	12.	1	1	58	53.	1	1	91
5.	1	1	26	13.	1	1	59	67.	1	1	92
5.	1	1	27	14.	1	1	60	69.	1	1	93
5.	1	1	29	14.	1	1	62	70.	1	1	95
5.	1	1	30	15.	1	1	63	107.	1	1	96
5.	1	1	31	15.	1	1	64	115.	1	1	97
6.	1	1	32	16.	1	1	65	130.	1	1	98
6.	1	1	33	17.	1	1	66	233.	1	1	99
6.	2	2	35	18.	1	1	67	346.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	11				

MEAN	24.727	STD ERR	4.980	MEDIAN	9.286
MODE	0.500	STD DEV	47.507	VARIANCE	2256.907
KURTOSIS	24.996	SKEWNESS	4.627	RANGE	345.965
MINIMUM	0.368	MAXIMUM	346.333		

VALID CASES 91 MISSING CASES 11

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTNMLTOT TON-MILES REV-NONREV FRT IN 000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	1	1	1	36.	1	1	35	152.	1	1	69
3.	1	1	2	36.	1	1	36	160.	1	1	70
4.	1	1	3	40.	1	1	37	163.	1	1	71
4.	1	1	4	40.	1	1	38	185.	1	1	72
6.	1	1	6	40.	1	1	39	190.	1	1	73
7.	1	1	7	41.	1	1	40	193.	1	1	74
8.	1	1	8	42.	1	1	42	194.	1	1	75
8.	1	1	9	44.	1	1	43	196.	1	1	76
10.	1	1	10	47.	1	1	44	198.	1	1	78
11.	1	1	11	49.	1	1	45	203.	1	1	79
11.	1	1	12	51.	1	1	46	204.	1	1	80
11.	1	1	13	52.	1	1	47	206.	1	1	81
13.	1	1	15	53.	1	1	48	208.	1	1	82
14.	1	1	16	55.	1	1	49	209.	1	1	83
14.	1	1	17	55.	1	1	51	220.	1	1	84
14.	1	1	18	55.	1	1	52	223.	1	1	85
14.	1	1	19	58.	1	1	53	235.	1	1	87
16.	1	1	20	63.	1	1	54	265.	1	1	88
17.	1	1	21	64.	1	1	55	292.	1	1	89
18.	1	1	22	68.	1	1	56	324.	1	1	90
19.	1	1	24	79.	1	1	57	344.	1	1	91
21.	1	1	25	100.	1	1	58	359.	1	1	92
22.	1	1	26	103.	1	1	60	395.	1	1	93
22.	1	1	27	112.	1	1	61	399.	1	1	94
22.	1	1	28	119.	1	1	62	533.	1	1	96
23.	1	1	29	121.	1	1	63	556.	1	1	97
25.	1	1	30	125.	1	1	64	617.	1	1	98
27.	1	1	31	143.	1	1	65	687.	1	1	99
28.	1	1	33	144.	1	1	66	1039.	1	1	100
35.	1	1	34	147.	1	1	67				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	13				

MEAN	132.303	STD ERR	18.427	MEDIAN	54.667
MODE	0.500	STD DEV	173.843	VARIANCE	30221.406
KURTOSIS	8.309	SKEWNESS	2.569	RANGE	1038.833
MINIMUM	0.500	MAXIMUM	1039.333		

VALID CASES 89   MISSING CASES 13

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XTOTNSRV TOT TONS REVENUE FREIGHT IN 000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	6.	1	1	36	18.	1	1	69
1.	1	1	2	6.	1	1	37	19.	2	2	71
1.	1	1	3	6.	1	1	38	19.	1	1	72
1.	1	1	4	7.	1	1	39	22.	1	1	73
1.	1	1	5	7.	1	1	40	22.	1	1	74
1.	1	1	6	7.	1	1	41	23.	1	1	75
1.	1	1	7	7.	1	1	42	23.	1	1	76
2.	1	1	8	8.	1	1	43	24.	1	1	77
2.	1	1	9	8.	1	1	44	25.	1	1	78
2.	3	3	12	8.	2	2	46	29.	1	1	79
2.	1	1	13	8.	1	1	47	31.	1	1	80
2.	1	1	14	8.	1	1	48	31.	1	1	81
2.	1	1	15	9.	1	1	49	31.	1	1	82
3.	1	1	16	9.	1	1	51	33.	1	1	84
3.	1	1	18	9.	1	1	52	34.	1	1	85
3.	1	1	19	9.	1	1	53	36.	1	1	86
3.	1	1	20	9.	1	1	54	40.	1	1	87
4.	1	1	21	9.	1	1	55	40.	1	1	88
4.	1	1	22	11.	1	1	56	43.	1	1	89
4.	1	1	23	11.	1	1	57	48.	1	1	90
5.	1	1	24	12.	1	1	58	53.	1	1	91
5.	1	1	25	12.	1	1	59	56.	1	1	92
5.	1	1	26	13.	1	1	60	67.	1	1	93
5.	1	1	27	14.	1	1	61	69.	1	1	94
5.	1	1	28	14.	1	1	62	100.	1	1	95
5.	1	1	29	15.	1	1	63	107.	1	1	96
5.	2	2	31	15.	1	1	64	115.	1	1	97
5.	1	1	32	16.	1	1	65	130.	1	1	98
5.	1	1	33	17.	1	1	66	233.	1	1	99
5.	1	1	34	17.	1	1	67	346.	1	1	100
5.	1	1	35	18.	1	1	68				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	5				

MEAN	23.930	STD ERR	4.735	MEDIAN	9.000
MODE	1.833	STD DEV	46.634	VARIANCE	2174.774
KURTOSIS	25.647	SKEWNESS	4.667	RANGE	345.965
MINIMUM	0.368	MAXIMUM	346.333		

VALID CASES 97 MISSING CASES 5

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

XGROSREV GROSS FREIGHT REVENUE IN $000 PER MILE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	1	1	1	11.	1	1	36	30.	1	1	69
2.	1	1	2	12.	1	1	37	30.	1	1	71
2.	1	1	3	12.	1	1	38	31.	1	1	72
2.	1	1	4	12.	1	1	39	33.	1	1	73
2.	1	1	5	13.	1	1	40	33.	1	1	74
3.	1	1	6	13.	1	1	41	34.	1	1	75
3.	1	1	7	14.	1	1	42	35.	1	1	76
3.	1	1	8	14.	1	1	43	36.	1	1	77
3.	1	1	9	16.	1	1	44	36.	1	1	78
4.	1	1	11	16.	1	1	45	37.	1	1	79
4.	1	1	12	16.	1	1	46	37.	1	1	80
4.	1	1	13	16.	1	1	47	37.	1	1	81
5.	1	1	14	17.	1	1	48	38.	1	1	82
5.	1	1	15	17.	1	1	49	40.	1	1	83
5.	1	1	16	17.	1	1	51	40.	1	1	84
6.	1	1	17	19.	1	1	52	41.	1	1	85
6.	1	1	18	19.	1	1	53	42.	1	1	86
6.	1	1	19	19.	1	1	54	42.	1	1	87
7.	1	1	20	19.	1	1	55	46.	1	1	88
8.	1	1	21	20.	1	1	56	49.	1	1	89
8.	1	1	22	21.	1	1	57	52.	1	1	91
9.	1	1	23	22.	1	1	58	56.	1	1	92
9.	1	1	24	22.	1	1	59	61.	1	1	93
9.	1	1	25	24.	1	1	60	83.	1	1	94
9.	1	1	26	24.	1	1	61	91.	1	1	95
10.	1	1	27	24.	1	1	62	96.	1	1	96
10.	2	2	29	24.	1	1	63	103.	1	1	97
10.	1	1	31	26.	1	1	64	111.	1	1	98
10.	1	1	32	26.	1	1	65	199.	1	1	99
11.	1	1	33	27.	1	1	66	214.	1	1	100
11.	1	1	34	29.	1	1	67				
11.	1	1	35	29.	1	1	68				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	7				

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

MEAN	27.713	STD ERR	3.537	MEDIAN	17.222
MODE	10.000	STD DEV	34.476	VARIANCE	1188.606
KURTOSIS	13.579	SKEWNESS	3.359	RANGE	213.158
MINIMUM	0.842	MAXIMUM	214.000		

VALID CASES 95 MISSING CASES 7

FILE RAIL4 (CREATION DATE = 06/17/76)

AVWAGOFF AVG $ WAGE PER HOUR EXEC-OFFS-ASSTS

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	15	17	17	6.	1	1	45	9.	1	1	73
1.	1	1	18	7.	1	1	46	10.	1	1	74
1.	1	1	19	7.	1	1	47	10.	1	1	75
2.	1	1	20	7.	1	1	48	10.	1	1	76
2.	1	1	21	7.	1	1	49	10.	1	1	78
3.	1	1	22	7.	1	1	51	10.	1	1	79
4.	1	1	24	7.	1	1	52	10.	1	1	80
4.	1	1	25	7.	1	1	53	10.	1	1	81
4.	1	1	26	7.	1	1	54	10.	1	1	82
4.	1	1	27	8.	1	1	55	10.	1	1	83
4.	1	1	28	8.	1	1	56	10.	1	1	84
4.	1	1	29	8.	1	1	57	11.	1	1	85
4.	1	1	30	8.	1	1	58	11.	1	1	87
5.	1	1	31	8.	1	1	60	11.	1	1	88
5.	1	1	33	8.	1	1	61	11.	1	1	89
5.	1	1	34	8.	1	1	62	11.	1	1	90
5.	1	1	35	8.	1	1	63	12.	1	1	91
5.	1	1	36	8.	1	1	64	12.	1	1	92
5.	1	1	37	8.	1	1	65	12.	1	1	93
5.	1	1	38	9.	1	1	66	12.	1	1	94
6.	1	1	39	9.	1	1	67	13.	1	1	96
6.	1	1	40	9.	1	1	69	13.	1	1	97
6.	1	1	42	9.	1	1	70	14.	1	1	98
6.	1	1	43	9.	1	1	71	15.	1	1	99
6.	1	1	44	9.	1	1	72	16.	1	1	100

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	13				

MEAN	6.491	STD ERR	0.441	MEDIAN	7.115
MODE	0.0	STD DEV	4.161	VARIANCE	17.315
KURTOSIS	-0.848	SKEWNESS	-0.134	RANGE	15.600
MINIMUM	0.0	MAXIMUM	15.600		

VALID CASES 89 MISSING CASES 13

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

AVWAGNOP AVG $ WAGE PER HOUR NONOP EMPLOYEES

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	2	2	2	4.	1	1	35	5.	1	1	68
1.	1	1	3	4.	1	1	36	5.	1	1	69
1.	1	1	4	4.	1	1	37	5.	1	1	70
2.	1	1	5	4.	1	1	38	5.	1	1	71
2.	1	1	6	4.	1	1	39	5.	1	1	72
2.	1	1	7	4.	1	1	40	5.	1	1	73
2.	1	1	9	4.	1	1	41	5.	1	1	74
2.	1	1	10	4.	1	1	43	5.	1	1	76
3.	1	1	11	4.	1	1	44	5.	1	1	77
3.	1	1	12	4.	1	1	45	5.	1	1	78
3.	1	1	13	4.	1	1	46	6.	1	1	79
3.	1	1	14	4.	1	1	47	6.	1	1	80
3.	1	1	15	4.	1	1	48	6.	1	1	81
3.	1	1	16	4.	1	1	49	6.	1	1	82
3.	1	1	17	4.	1	1	50	6.	1	1	83
3.	1	1	18	4.	1	1	51	6.	1	1	84
3.	1	1	19	4.	1	1	52	6.	1	1	85
3.	1	1	20	4.	1	1	53	6.	1	1	86
3.	1	1	21	4.	1	1	54	6.	1	1	87
3.	1	1	22	5.	1	1	55	6.	1	1	88
3.	1	1	23	5.	1	1	56	6.	1	1	89
3.	1	1	24	5.	1	1	57	6.	1	1	90
3.	1	1	26	5.	1	1	59	6.	1	1	91
3.	1	1	27	5.	1	1	60	7.	1	1	93
4.	1	1	28	5.	1	1	61	7.	1	1	94
4.	1	1	29	5.	1	1	62	7.	1	1	95
4.	1	1	30	5.	1	1	63	8.	1	1	96
4.	1	1	31	5.	1	1	64	8.	1	1	97
4.	1	1	32	5.	1	1	65	8.	1	1	98
4.	1	1	33	5.	1	1	66	8.	1	1	99
4.	1	1	34	5.	1	1	67	9.	1	1	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	8				

MEAN	4.391	STD ERR	0.167	MEDIAN	4.333
MODE	0.0	STD DEV	1.617	VARIANCE	2.613
KURTOSIS	0.629	SKEWNESS	-0.001	RANGE	8.750
MINIMUM	0.0	MAXIMUM	8.750		

VALID CASES 94 MISSING CASES 8

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

AVWAGOP AVG $ WAGE PER HOUR TRAIN-ENGINE EMPLYS

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	3	3	3	4.	1	1	36	5.	1	1	69
1.	1	1	4	4.	1	1	37	5.	1	1	70
2.	1	1	5	4.	1	1	38	5.	1	1	71
2.	1	1	6	4.	1	1	39	5.	1	1	72
2.	1	1	7	4.	1	1	40	5.	1	1	73
3.	1	1	9	4.	1	1	41	5.	1	1	74
3.	1	1	10	4.	1	1	43	5.	1	1	76
3.	1	1	11	4.	1	1	44	5.	1	1	77
3.	1	1	12	4.	1	1	45	6.	1	1	78
3.	1	1	13	4.	1	1	46	6.	1	1	79
3.	1	1	14	4.	1	1	47	6.	1	1	80
3.	1	1	15	4.	1	1	48	6.	1	1	81
3.	1	1	16	4.	1	1	49	6.	1	1	82
3.	1	1	17	4.	1	1	50	6.	1	1	83
3.	1	1	18	4.	1	1	51	6.	1	1	84
3.	1	1	19	4.	1	1	52	6.	1	1	85
3.	1	1	20	4.	1	1	53	6.	1	1	86
3.	1	1	21	4.	1	1	54	6.	1	1	87
3.	1	1	22	4.	1	1	55	6.	1	1	88
3.	1	1	23	4.	1	1	56	6.	1	1	89
3.	1	1	24	4.	1	1	57	6.	1	1	90
4.	1	1	26	4.	1	1	59	6.	1	1	91
4.	1	1	27	4.	1	1	60	6.	1	1	93
4.	1	1	28	5.	1	1	61	6.	1	1	94
4.	1	1	29	5.	1	1	62	6.	1	1	95
4.	1	1	30	5.	1	1	63	7.	1	1	96
4.	1	1	31	5.	1	1	64	7.	1	1	97
4.	1	1	32	5.	1	1	65	7.	1	1	98
4.	1	1	33	5.	1	1	66	7.	1	1	99
4.	1	1	34	5.	1	1	67	9.	1	1	100
4.	1	1	35	5.	1	1	68				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	8				

MEAN	4.292	STD ERR	0.160	MEDIAN	4.194
MODE	0.0	STD DEV	1.552	VARIANCE	2.408
KURTOSIS	1.221	SKEWNESS	-0.079	RANGE	9.273
MINIMUM	0.0	MAXIMUM	9.273		

VALID CASES 94 MISSING CASES 8

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

AVWAGTOT AVG $ WAGE PER HOUR - ALL EMPLOYEES

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	1	1	1	4.	1	1	34	5.	1	1	68
2.	1	1	2	4.	1	1	35	5.	1	1	69
2.	1	1	3	4.	1	1	37	5.	1	1	70
2.	1	1	4	4.	1	1	38	5.	1	1	71
2.	1	1	5	4.	1	1	39	5.	1	1	72
2.	1	1	6	4.	1	1	40	5.	1	1	73
3.	1	1	8	4.	1	1	41	5.	1	1	74
3.	1	1	9	4.	1	1	42	5.	1	1	75
3.	1	1	10	4.	1	1	43	5.	1	1	76
3.	1	1	11	4.	1	1	44	5.	1	1	77
3.	1	1	12	4.	1	1	45	5.	1	1	78
3.	1	1	13	4.	1	1	46	6.	1	1	80
3.	1	1	14	4.	1	1	47	6.	1	1	81
3.	1	1	15	4.	1	1	48	6.	1	1	82
3.	1	1	16	4.	1	1	49	6.	1	1	83
3.	1	1	17	4.	1	1	51	6.	1	1	84
3.	1	1	18	4.	1	1	52	6.	1	1	85
3.	1	1	19	4.	1	1	53	6.	1	1	86
3.	1	1	20	4.	1	1	54	6.	1	1	87
3.	1	1	22	4.	1	1	55	6.	1	1	88
3.	1	1	23	5.	1	1	56	6.	1	1	89
3.	1	1	24	5.	1	1	57	6.	1	1	90
3.	1	1	25	5.	1	1	58	6.	1	1	91
3.	1	1	26	5.	1	1	59	6.	1	1	92
4.	1	1	27	5.	1	1	60	6.	1	1	94
4.	1	1	28	5.	1	1	61	6.	1	1	95
4.	1	1	29	5.	1	1	62	7.	1	1	96
4.	1	1	30	5.	1	1	63	7.	1	1	97
4.	1	1	31	5.	1	1	65	8.	1	1	98
4.	1	1	32	5.	1	1	66	8.	1	1	99
4.	1	1	33	5.	1	1	67	9.	1	1	100

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	9				

MEAN	4.438	STD ERR	0.145	MEDIAN	4.250
MODE	0.745	STD DEV	1.394	VARIANCE	1.943
KURTOSIS	0.336	SKEWNESS	0.345	RANGE	8.005
MINIMUM	0.745	MAXIMUM	8.750		

VALID CASES 93   MISSING CASES 9

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

EASTERN CARRIER LOCATED IN EASTERN DISTRICT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	64	63	63	1.	38	37	100				

MEAN	0.373	STD ERR	0.048	MEDIAN	0.297
MODE	0.0	STD DEV	0.486	VARIANCE	0.236
KURTOSIS	-1.735	SKEWNESS	0.525	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 102 MISSING CASES 0

SOUTHERN CARRIER LOCATED IN SOUTHERN DISTRICT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	77	75	75	1.	25	25	100				

MEAN	0.245	STD ERR	0.043	MEDIAN	0.162
MODE	0.0	STD DEV	0.432	VARIANCE	0.187
KURTOSIS	-0.619	SKEWNESS	1.179	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES	102	MISSING CASES	0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

WESTERN CARRIER LOCATED IN WESTERN DISTRICT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	63	62	62	1.	39	38	100				

MEAN	0.382	STD ERR	0.048	MEDIAN	0.310
MODE	0.0	STD DEV	0.488	VARIANCE	0.238
KURTOSIS	-1.778	SKEWNESS	0.482	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES	102	MISSING CASES	0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

INDEP CARRIER OWNERSHIP - INDEPENDENT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	62	61	61	1.	40	39	100				

MEAN	0.392	STD ERR	0.049	MEDIAN	0.323
MODE	0.0	STD DEV	0.491	VARIANCE	0.241
KURTOSIS	-1.817	SKEWNESS	0.440	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

INDUSTRY CARRIER OWNERSHIP - SHIPPER-INDUSTRY

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	45	44	44	1.	57	56	100				

MEAN	0.559	STD ERR	0.049	MEDIAN	0.605
MODE	1.000	STD DEV	0.499	VARIANCE	0.249
KURTOSIS	-1.954	SKEWNESS	-0.236	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

GOVT CARRIER OWNERSHIP - GOVERNMENTAL UNIT

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	97	95	95	1.	5	5	100				

MEAN	0.049	STD ERR	0.021	MEDIAN	0.026
MODE	0.0	STD DEV	0.217	VARIANCE	0.047
KURTOSIS	15.271	SKEWNESS	4.157	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 102 MISSING CASES 0

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

OPR SEGMENTATION BY OPERATING RATIO

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	42	42	42	2.	35	35	76	3.	24	24	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	1				

MEAN	1.822	STD ERR	0.079	MEDIAN	1.743
MODE	1.000	STD DEV	0.792	VARIANCE	0.628
KURTOSIS	-1.340	SKEWNESS	0.324	RANGE	2.000
MINIMUM	1.000	MAXIMUM	3.000		

VALID CASES 101 MISSING CASES 1

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TRAK SEGMENTATION BY MAIN TRACK MILEAGE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	41	41	41	2.	37	37	78	3.	22	22	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	2				

MEAN	1.810	STD ERR	0.077	MEDIAN	1.743
MODE	1.000	STD DEV	0.775	VARIANCE	0.600
KURTOSIS	-1.265	SKEWNESS	0.338	RANGE	2.000
MINIMUM	1.000	MAXIMUM	3.000		

VALID CASES 100 MISSING CASES 2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

REV SEGMENTATION BY GROSS FREIGHT REV $000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
1.	31	32	32	2.	26	27	59	3.	39	41	100

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	6				

MEAN	2.083	STD ERR	0.087	MEDIAN	2.154
MODE	3.000	STD DEV	0.854	VARIANCE	0.730
KURTOSIS	-1.612	SKEWNESS	-0.159	RANGE	2.000
MINIMUM	1.000	MAXIMUM	3.000		

VALID CASES 96 MISSING CASES 6

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PRD HIGHEST TONNAGE COMM TYPE BY STCC CODE

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	15	15	15	2.	40	41	83	4.	2	2	100
1.	26	27	42	3.	15	15	98				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	4				

MEAN	1.622	STD ERR	0.100	MEDIAN	1.700
MODE	2.000	STD DEV	0.990	VARIANCE	0.980
KURTOSIS	-0.566	SKEWNESS	-0.022	RANGE	4.000
MINIMUM	0.0	MAXIMUM	4.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TRAK1 MAIN TRACK MILEAGE LESS THAN 10 MILES

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	59	59	59	1.	41	41	100				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	2				

MEAN	0.410	STD ERR	0.049	MEDIAN	0.347
MODE	0.0	STD DEV	0.494	VARIANCE	0.244
KURTOSIS	-1.877	SKEWNESS	0.364	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 100 MISSING CASES 2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

TRAK2 MAIN TRACK MILEAGE GT OR EQ TO 10 MILES

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	41	41	41	1.	59	59	100				

MISSING DATA

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	2				

MEAN	0.590	STD ERR	0.049	MEDIAN	0.653
MODE	1.000	STD DEV	0.494	VARIANCE	0.244
KURTOSIS	-1.877	SKEWNESS	-0.364	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 100 MISSING CASES 2

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PRODO HIGHEST TONNAGE COMM IS STCC CODE 01-09

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	83	85	85	1.	15	15	100				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	4				

MEAN	0.153	STD ERR	0.037	MEDIAN	0.090
MODE	0.0	STD DEV	0.362	VARIANCE	0.131
KURTOSIS	1.666	SKEWNESS	1.917	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PROD1 HIGHEST TONNAGE COMM IS STCC CODE 10-19

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	72	73	73	1.	26	27	100				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	4				

MEAN	0.265	STD ERR	0.045	MEDIAN	0.181
MODE	0.0	STD DEV	0.444	VARIANCE	0.197
KURTOSIS	-0.891	SKEWNESS	1.058	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PROD2 HIGHEST TONNAGE COMM IS STCC CODE 20-29

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	58	59	59	1.	40	41	100				

M I S S I N G   D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	4				

MEAN	0.408	STD ERR	0.050	MEDIAN	0.345
MODE	0.0	STD DEV	0.494	VARIANCE	0.244
KURTOSIS	-1.872	SKEWNESS	0.372	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PROD3 HIGHEST TONNAGE COMM IS STCC CODE 30-39

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	83	85	85	1.	15	15	100				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	4				

MEAN	0.153	STD ERR	0.037	MEDIAN	0.090
MODE	0.0	STD DEV	0.362	VARIANCE	0.131
KURTOSIS	1.666	SKEWNESS	1.917	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES	98	MISSING CASES	4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

PROD4 HIGHEST TONNAGE COMM IS STCC CODE 40-47

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	96	98	98	1.	2	2	100				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	4				

MEAN	0.020	STD ERR	0.014	MEDIAN	0.010
MODE	0.0	STD DEV	0.142	VARIANCE	0.020
KURTOSIS	43.541	SKEWNESS	6.749	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 98 MISSING CASES 4

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

LOCMILES TOTAL LOCOMOTIVE UNIT-MILES 000

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.	1	1	1	5.	1	1	34	13.	2	2	70
0.	1	1	2	5.	2	2	36	13.	1	1	71
0.	2	2	4	5.	1	1	37	15.	1	1	72
0.	1	1	5	5.	1	1	38	15.	1	1	73
1.	1	1	6	5.	1	1	39	16.	2	2	76
1.	1	1	7	5.	1	1	40	16.	1	1	77
1.	1	1	9	6.	2	2	43	16.	1	1	78
1.	1	1	10	6.	1	1	44	17.	1	1	79
2.	1	1	11	6.	1	1	45	18.	1	1	80
2.	2	2	13	6.	1	1	46	20.	1	1	81
2.	1	1	14	6.	1	1	47	21.	1	1	82
2.	1	1	15	7.	1	1	48	21.	1	1	83
3.	1	1	16	7.	1	1	49	21.	1	1	84
3.	1	1	17	8.	1	1	50	22.	1	1	85
3.	1	1	18	8.	1	1	51	26.	1	1	86
3.	1	1	19	9.	1	1	52	28.	1	1	87
3.	1	1	20	9.	1	1	53	33.	1	1	88
3.	1	1	21	9.	1	1	54	36.	1	1	89
3.	1	1	22	9.	1	1	55	36.	1	1	90
3.	1	1	23	9.	1	1	56	39.	1	1	91
3.	1	1	24	10.	1	1	57	40.	1	1	93
4.	1	1	26	10.	1	1	59	49.	1	1	94
4.	1	1	27	10.	3	3	62	49.	1	1	95
4.	1	1	28	11.	1	1	63	53.	1	1	96
4.	1	1	29	11.	1	1	64	63.	1	1	97
4.	1	1	30	12.	1	1	65	77.	1	1	98
4.	1	1	31	12.	1	1	66	81.	1	1	99
4.	1	1	32	12.	1	1	67	101.	1	1	100
5.	1	1	33	12.	1	1	68				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.	8				

MEAN	14.124	STD ERR	1.893	MEDIAN	7.600
MODE	10.300	STD DEV	18.349	VARIANCE	336.698
KURTOSIS	7.121	SKEWNESS	2.569	RANGE	101.200
MINIMUM	0.100	MAXIMUM	101.300		

VALID CASES 94 MISSING CASES 8

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

LOCPCTSW PCT OF LOCMILES FOR SWITCHING

CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT	CODE	FREQ	ADJ PCT	CUM PCT
0.0	25	27	27	0.20	1	1	52	0.43	1	1	77
0.00	1	1	28	0.20	1	1	53	0.44	1	1	78
0.02	1	1	29	0.20	1	1	54	0.47	1	1	79
0.02	1	1	30	0.20	1	1	55	0.48	1	1	80
0.04	1	1	31	0.21	1	1	56	0.50	1	1	81
0.04	1	1	32	0.22	1	1	57	0.53	1	1	82
0.07	1	1	33	0.23	1	1	59	0.54	1	1	83
0.07	1	1	34	0.25	1	1	60	0.56	1	1	84
0.08	1	1	35	0.26	1	1	61	0.56	1	1	85
0.08	1	1	36	0.27	1	1	62	0.61	1	1	86
0.09	1	1	37	0.27	1	1	63	0.61	1	1	87
0.10	1	1	38	0.30	1	1	64	0.70	1	1	88
0.10	1	1	39	0.30	1	1	65	0.74	1	1	89
0.10	1	1	40	0.31	1	1	66	0.77	1	1	90
0.10	1	1	41	0.31	1	1	67	0.78	1	1	91
0.11	1	1	43	0.32	1	1	68	0.80	1	1	93
0.11	2	2	45	0.32	1	1	69	0.83	1	1	94
0.14	1	1	46	0.36	1	1	70	0.83	1	1	95
0.14	1	1	47	0.37	1	1	71	0.88	1	1	96
0.16	1	1	48	0.38	1	1	72	0.89	1	1	97
0.17	1	1	49	0.39	1	1	73	0.94	1	1	98
0.19	1	1	50	0.41	1	1	74	1.00	2	2	100
0.19	1	1	51	0.43	1	1	76				

M I S S I N G D A T A

CODE	FREQ	CODE	FREQ	CODE	FREQ
99999.00	8				

MEAN	0.264	STD ERR	0.029	MEDIAN	0.190
MODE	0.0	STD DEV	0.284	VARIANCE	0.081
KURTOSIS	-0.008	SKEWNESS	1.022	RANGE	1.000
MINIMUM	0.0	MAXIMUM	1.000		

VALID CASES 94 MISSING CASES 8

APPENDIX 9

RESULTS OF INTERMEDIATE REGRESSION ANALYSES

ICC DATA CLASS I'I RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

VARIABLE	MEAN	STANDARD DEV	CASES
EASTERN	0.3721	0.4862	86
SOUTHERN	0.2558	0.4389	86
WESTERN	0.3721	0.4862	86
INDEP	0.3953	0.4918	86
INDUSTRY	0.5465	0.5008	86
TRAKMAIN	14.5465	12.2586	86
TOTTNSRV	207.7791	246.3794	86
LOCMILES	13.8721	17.5836	86
ADMIN	26.7046	28.3689	86
XTIESREP	96.9397	87.0024	86
TOTMOWS	67.6953	63.0269	86
TOTMOE	37.5070	46.5453	86
TRAFFIC	6.8105	8.9444	86
TOTTRANS	81.0337	96.1611	86
TOTGEN	37.0349	33.5025	86
GRANDTOT	230.4383	199.7320	86
NUMCONNS	1.3605	0.7180	86

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

CORRELATION COEFFICIENTS

A VALUE OF 99.00000 IS PRINTED
IF A COEFFICIENT CANNOT BE COMPUTED.

	EASTERN	SOUTHERN	WESTERN	INDEP	INDUSTRY	TRAKMAIN	TOTTNSRV	LOCMILES	ADMIN	XTIESREP	TOTMOWS	TOTMOE
EASTERN	1.00000	-0.45134	-0.59259	0.06637	-0.12024	-0.08387	-0.16342	-0.10570	-0.18001	0.00086	-0.13597	-0.03963
SOUTHERN	-0.45134	1.00000	-0.45134	0.12549	-0.10831	-0.05909	-0.01427	-0.06248	0.14835	-0.07743	-0.09178	-0.10180
WESTERN	-0.59259	-0.45134	1.00000	-0.17965	0.21801	0.13721	0.17630	0.16210	0.04610	0.06903	0.21882	0.13151
INDEP	0.06637	0.12549	-0.17965	1.00000	-0.88768	-0.09480	-0.08141	-0.13326	0.06825	-0.09277	-0.11798	-0.15739
INDUSTRY	-0.12024	-0.10831	0.21801	-0.88768	1.00000	0.09068	0.11532	0.11786	-0.03621	0.02068	0.06490	0.15797
TRAKMAIN	-0.08387	-0.05909	0.13721	-0.09480	0.09068	1.00000	0.14991	0.40636	0.24414	-0.17957	0.54997	0.22284
TOTTNSRV	-0.16342	-0.01427	0.17630	-0.08141	0.11532	0.14991	1.00000	0.64723	0.39594	0.10418	0.55198	0.60762
LOCMILES	-0.10570	-0.06248	0.16210	-0.13326	0.11786	0.40636	0.64723	1.00000	0.29976	-0.05976	0.54876	0.79221
ADMIN	-0.18001	0.14835	0.04610	0.06825	-0.03621	0.24414	0.39594	0.29976	1.00000	0.16070	0.34138	0.29078
XTIESREP	0.00086	-0.07743	0.06903	-0.09277	0.02068	-0.17957	0.10418	-0.05976	0.16070	1.00000	0.22400	0.00861
TOTMOWS	-0.13597	-0.09178	0.21882	-0.11798	0.06490	0.54997	0.55198	0.54876	0.34138	0.22400	1.00000	0.46725
TOTMOE	-0.03963	-0.10180	0.13151	-0.15739	0.15797	0.22284	0.60762	0.79221	0.29078	0.00861	0.46725	1.00000
TRAFFIC	-0.18297	0.24057	-0.03418	0.17664	-0.12658	0.37141	0.29687	0.35302	0.29453	-0.11574	0.32555	0.27352
TOTTRANS	-0.14116	-0.11511	0.24507	-0.18557	0.18422	0.21479	0.78431	0.86919	0.39441	0.07420	0.52143	0.78831
TOTGEN	-0.15761	0.15565	0.01711	0.05792	-0.03250	0.25081	0.44888	0.39508	0.94622	0.11492	0.39413	0.38641
GRANDTOT	-0.14791	-0.07757	0.21793	-0.14355	0.13292	0.38696	0.78064	0.85859	0.54044	0.12409	0.75763	0.83824
NUMCONNS	-0.11912	0.03994	0.08307	-0.00852	0.00190	0.37966	0.32212	0.33560	0.32507	-0.08514	0.38134	0.18057

	TRAFFIC	TOTTRANS	TOTGEN	GRANDTOT	NUMCONNS
EASTERN	-0.18297	-0.14116	-0.15761	-0.14791	-0.11912
SOUTHERN	0.24057	-0.11511	0.15565	-0.07757	0.03994
WESTERN	-0.03418	0.24507	0.01711	0.21793	0.08307
INDEP	0.17664	-0.18557	0.05792	-0.14355	-0.00852
INDUSTRY	-0.12658	0.18422	-0.03250	0.13292	0.00190
TRAKMAIN	0.37141	0.21479	0.25081	0.38696	0.37966
TOTTNSRV	0.29687	0.78431	0.44888	0.78064	0.32212
LOCMILES	0.35302	0.86919	0.39508	0.85859	0.33560
ADMIN	0.29453	0.39441	0.94622	0.54044	0.32507
XTIESREP	-0.11574	0.07420	0.11492	0.12409	-0.08514
TOTMOWS	0.32555	0.52143	0.39413	0.75763	0.38134
TOTMOE	0.27352	0.78831	0.38641	0.83824	0.18057
TRAFFIC	1.00000	0.27346	0.34062	0.39162	0.50956
TOTTRANS	0.27346	1.00000	0.45333	0.91696	0.30559
TOTGEN	0.34062	0.45333	1.00000	0.62060	0.35432
GRANDTOT	0.39162	0.91696	0.62060	1.00000	0.40222
NUMCONNS	0.50956	0.30559	0.35432	0.40222	1.00000

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. TOTMOWS TOTAL M O W AND STRUCTURES $000

VARIABLE(S) ENTERED ON STEP NUMBER 1..

EASTERN	CARRIER LOCATED IN EASTERN DISTRICT
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT
INDEP	CARRIER OWNERSHIP - INDEPENDENT
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY
TRAKMAIN	MAIN TRACK MILEAGE - MILES
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000
XTIESREP	NUMBER OF TIES REPLACED PER MILE

MULTIPLE R	0.78303
R SQUARE	0.61314
ADJUSTED R SQUARE	0.57842
STANDARD ERROR	40.92270

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	207028.86813	29575.55259	17.66056
RESIDUAL	78.	130624.04024	1674.66718	

------------------ VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
EASTERN	-8.13773	-0.06278	10.65644	0.583
SOUTHERN	-9.06581	-0.06313	11.66685	0.604
INDEP	-26.73147	-0.20858	20.02914	1.781
INDUSTRY	-30.03625	-0.23864	19.74336	2.314
TRAKMAIN	2.67882	0.52103	0.37844	50.106
TOTTNSRV	0.11436	0.44703	0.01874	37.228
XTIESREP	0.18236	0.25174	0.05344	11.645
(CONSTANT)	19.61929			

------------- VARIABLES NOT IN THE EQUATION -------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. TOTMOWS TOTAL M O W AND STRUCTURES $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
EASTERN	CARRIER LOCATED IN EASTERN DISTRICT	0.13597	0.01849	0.01849	-0.13597	-8.13773	-0.06278
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT	0.21896	0.04794	0.02945	-0.09178	-9.06581	-0.06313
INDEP	CARRIER OWNERSHIP - INDEPENDENT	0.23327	0.05442	0.00648	-0.11798	-26.73147	-0.20858
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY	0.25988	0.06754	0.01312	0.06490	-30.03625	-0.23864
TRAKMAIN	MAIN TRACK MILEAGE - MILES	0.58149	0.33813	0.27060	0.54997	2.67882	0.52103
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.74524	0.55538	0.21725	0.55198	0.11436	0.44703
XTIESREP	NUMBER OF TIES REPLACED PER MILE	0.78303	0.61314	0.05776	0.22400	0.18236	0.25174
(CONSTANT)						19.61929	

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * * *   VARIABLE LIST 1
REGRESSION LIST 2

DEPENDENT VARIABLE.. TOTMDE TOTAL MAINTENANCE OF EQUIPMENT $000

VARIABLE(S) ENTERED ON STEP NUMBER 1..

EASTERN	CARRIER LOCATED IN EASTERN DISTRICT
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT
INDEP	CARRIER OWNERSHIP - INDEPENDENT
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY
TRAKMAIN	MAIN TRACK MILEAGE - MILES
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000
LOCMILES	TOTAL LOCOMOTIVE UNIT-MILES 000

MULTIPLE R	0.81221
R SQUARE	0.65969
ADJUSTED R SQUARE	0.62915
STANDARD ERROR	28.34509

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	121480.88828	17354.41261	21.60003
RESIDUAL	78.	62668.63639	803.44406	

------------------ VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
EASTERN	4.56540	0.04769	7.37197	0.384
SOUTHERN	-3.33699	-0.03146	8.05161	0.172
INDEP	0.95693	0.01011	13.73995	0.005
INDUSTRY	6.96919	0.07498	13.56549	0.264
TRAKMAIN	-0.38331	-0.10095	0.27971	1.878
TOTTNSRV	0.02791	0.14772	0.01686	2.741
LOCMILES	1.94087	0.73321	0.25353	58.605
(CONSTANT)	5.32813			

------------------ VARIABLES NOT IN THE EQUATION ------------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * * *   VARIABLE LIST 1
REGRESSION LIST 2

DEPENDENT VARIABLE.. TOTMOE TOTAL MAINTENANCE OF EQUIPMENT $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
EASTERN	CARRIER LOCATED IN EASTERN DISTRICT	0.03963	0.00157	0.00157	-0.03963	4.56540	0.04769
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT	0.13985	0.01956	0.01799	-0.10180	-3.33699	-0.03146
INDEP	CARRIER OWNERSHIP - INDEPENDENT	0.19351	0.03744	0.01789	-0.15739	0.95698	0.01011
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY	0.19571	0.03830	0.00086	0.15797	6.96919	0.07498
TRAKMAIN	MAIN TRACK MILEAGE - MILES	0.27827	0.07744	0.03913	0.22284	-0.38331	-0.10095
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.63560	0.40399	0.32656	0.60762	0.02791	0.14772
LOCMILES	TOTAL LOCOMOTIVE UNIT-MILES 000	0.81221	0.65969	0.25569	0.79221	1.94087	0.73321
(CONSTANT)						5.32813	

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 3

DEPENDENT VARIABLE.. TRAFFIC TRAFFIC EXPENSES $000

VARIABLE(S) ENTERED ON STEP NUMBER 1..

EASTERN	CARRIER LOCATED IN EASTERN DISTRICT
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT
INDEP	CARRIER OWNERSHIP - INDEPENDENT
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY
TRAKMAIN	MAIN TRACK MILEAGE - MILES
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000
NUMCONNS	NUMBER OF CONNECTING CARRIERS

MULTIPLE R	0.63978
R SQUARE	0.40932
ADJUSTED R SQUARE	0.35632
STANDARD ERROR	7.17607

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	2783.47257	397.63894	7.72175
RESIDUAL	78.	4016.68560	51.49597	

---------------- VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
EASTERN	-0.02493	-0.00136	1.86746	0.000
SOUTHERN	4.44475	0.21809	2.03897	4.752
INDEP	5.18174	0.28491	3.45782	2.246
INDUSTRY	1.94750	0.10903	3.42612	0.323
TRAKMAIN	0.17563	0.24070	0.06935	6.414
TOTTNSRV	0.00574	0.15814	0.00340	2.849
NUMCONNS	4.49162	0.36058	1.23091	13.315
(CONSTANT)	-7.28853			

------------- VARIABLES NOT IN THE EQUATION -------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* MULTIPLE REGRESSION * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 3

DEPENDENT VARIABLE.. TRAFFIC TRAFFIC EXPENSES $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
EASTERN	CARRIER LOCATED IN EASTERN DISTRICT	0.18297	0.03348	0.03348	-0.18297	-0.02493	-0.00136
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT	0.25461	0.06482	0.03134	0.24057	4.44475	0.21809
INDEP	CARRIER OWNERSHIP - INDEPENDENT	0.30111	0.09067	0.02584	0.17664	5.18174	0.28491
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY	0.30511	0.09309	0.00242	-0.12658	1.94750	0.10903
TRAKMAIN	MAIN TRACK MILEAGE - MILES	0.49645	0.24646	0.15337	0.37141	0.17563	0.24070
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.55542	0.30849	0.06203	0.29687	0.00574	0.15814
NUMCONNS	NUMBER OF CONNECTING CARRIERS	0.63978	0.40932	0.10083	0.50956	4.49162	0.36058
(CONSTANT)						-7.28853	

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. TOTTRANS TOTAL TRANSPORTATION RAIL LINE $000

VARIABLE(S) ENTERED ON STEP NUMBER 1..

EASTERN	CARRIER LOCATED IN EASTERN DISTRICT
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT
INDEP	CARRIER OWNERSHIP - INDEPENDENT
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY
TRAKMAIN	MAIN TRACK MILEAGE - MILES
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000
LOCMILES	TOTAL LOCOMOTIVE UNIT-MILES 000

MULTIPLE R	0.92977
R SQUARE	0.86448
ADJUSTED R SQUARE	0.85232
STANDARD ERROR	36.95453

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	679472.24590	97067.46370	71.07850
RESIDUAL	78.	106519.72235	1365.63747	

------------------ VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
EASTERN	-12.22108	-0.06179	9.61110	1.617
SOUTHERN	-20.94280	-0.09558	10.49718	3.980
INDEP	-10.72467	-0.05485	17.91327	0.358
INDUSTRY	1.83887	0.00958	17.68583	0.011
TRAKMAIN	-1.00675	-0.12834	0.36467	7.621
TOTTNSRV	0.13685	0.35063	0.02198	38.774
LOCMILES	3.68305	0.67347	0.33054	124.159
(CONSTANT)	29.29206			

------------------ VARIABLES NOT IN THE EQUATION ------------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * *   VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. TOTTRANS TOTAL TRANSPORTATION RAIL LINE $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
EASTERN	CARRIER LOCATED IN EASTERN DISTRICT	0.14116	0.01993	0.01993	-0.14116	-12.22108	-0.06179
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT	0.24512	0.06009	0.04016	-0.11511	-20.94280	-0.09558
INDEP	CARRIER OWNERSHIP - INDEPENDENT	0.28420	0.08077	0.02068	-0.18557	-10.72467	-0.05485
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY	0.28457	0.08098	0.00021	0.18422	1.83887	0.00958
TRAKMAIN	MAIN TRACK MILEAGE - MILES	0.33303	0.11091	0.02993	0.21479	-1.00675	-0.12834
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.80545	0.64876	0.53785	0.78431	0.13685	0.35063
LOCMILES	TOTAL LOCOMOTIVE UNIT-MILES 000	0.92977	0.86448	0.21572	0.86919	3.68305	0.67347
(CONSTANT)						29.29206	

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. TOTGEN TOTAL GENERAL EXPENSES $000

VARIABLE(S) ENTERED ON STEP NUMBER 1..

EASTERN	CARRIER LOCATED IN EASTERN OISTRICT
SOUTHERN	CARRIER LOCATEO IN SOUTHERN OISTRICT
INDEP	CARRIER OWNERSHIP - INDEPENOENT
INOUSTRY	CARRIER OWNERSHIP - SHIPPER-INOUSTRY
TRAKMAIN	MAIN TRACK MILEAGE - MILES
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIEO 000
ADMIN	AOMINISTRATION $000

MULTIPLE R	0.95086
R SQUARE	0.90414
ADJUSTED R SQUARE	0.89554
STANDARD ERROR	10.82828

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	86259.93881	12322.84840	105.09751
RESIDUAL	78.	9145.62248	117.25157	

------------------ VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
EASTERN	2.80163	0.04066	2.81962	0.987
SOUTHERN	3.26197	0.04273	3.09925	1.108
INDEP	-1.57877	-0.02318	5.22622	0.091
INDUSTRY	-1.58897	-0.02375	5.16266	0.095
TRAKMAIN	0.05868	0.02147	0.10022	0.343
TOTTNSRV	0.01299	0.09550	0.00530	5.995
AOMIN	1.06862	0.90437	0.04720	512.636
(CONSTANT)	4.56165			

-------------- VARIABLES NOT IN THE EQUATION --------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. TOTGEN TOTAL GENERAL EXPENSES $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
EASTERN	CARRIER LOCATED IN EASTERN DISTRICT	0.15761	0.02484	0.02484	-0.15761	2.80163	0.04066
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT	0.18388	0.03381	0.00897	0.15565	3.26197	0.04273
INDEP	CARRIER OWNERSHIP - INDEPENDENT	0.19131	0.03660	0.00279	0.05792	-1.57877	-0.02318
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY	0.19293	0.03722	0.00062	-0.03250	-1.58897	-0.02375
TRAKMAIN	MAIN TRACK MILEAGE - MILES	0.31959	0.10214	0.06492	0.25081	0.05868	0.02147
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.52356	0.27412	0.17198	0.44888	0.01299	0.09550
ADMIN	ADMINISTRATION $000	0.95086	0.90414	0.63002	0.94622	1.06862	0.90487
(CONSTANT)						4.55165	

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. GRANDTOT GRAND TOTAL RWY OPER EXPENSES $000

VARIABLE(S) ENTERED ON STEP NUMBER 1..

EASTERN	CARRIER LOCATED IN EASTERN DISTRICT
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT
INDEP	CARRIER OWNERSHIP - INDEPENDENT
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY
TRAKMAIN	MAIN TRACK MILEAGE - MILES
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000
XTIESREP	NUMBER OF TIES REPLACED PER MILE

MULTIPLE R	0.83698
R SQUARE	0.70054
ADJUSTED R SQUARE	0.67367
STANDARD ERROR	114.09788

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	2375463.16634	339351.88091	26.06724
RESIDUAL	78.	1015429.50212	13018.32695	

------------------ VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
EASTERN	-14.14014	-0.03442	29.71155	0.226
SOUTHERN	-24.54898	-0.05394	32.52872	0.570
INDEP	-57.79054	-0.14230	55.84388	1.071
INDUSTRY	-45.65173	-0.11445	55.04711	0.688
TRAKMAIN	4.63353	0.28439	1.05515	19.284
TOTTNSRV	0.58725	0.72440	0.05226	126.291
XTIESREP	0.19446	0.08471	0.14900	1.703
(CONSTANT)	81.50544			

------------- VARIABLES NOT IN THE EQUATION -------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. GRANDTOT GRAND TOTAL RWY OPER EXPENSES $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
EASTERN	CARRIER LOCATED IN EASTERN DISTRICT	0.14791	0.02188	0.02188	-0.14791	-14.14014	-0.03442
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT	0.21917	0.04804	0.02616	-0.07757	-24.54898	-0.05394
INDEP	CARRIER OWNERSHIP - INDEPENDENT	0.24409	0.05958	0.01154	-0.14355	-57.79054	-0.14230
INDUSTRY	CARRIER OWNERSHIP - SHIPPER-INDUSTRY	0.24458	0.05982	0.00024	0.13292	-45.65173	-0.11445
TRAKMAIN	MAIN TRACK MILEAGE - MILES	0.42988	0.18480	0.12498	0.38696	4.63353	0.28439
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.83307	0.69400	0.50921	0.78064	0.58725	0.72440
XTIESREP	NUMBER OF TIES REPLACED PER MILE	0.83698	0.70054	0.00654	0.12409	0.19446	0.08471
(CONSTANT)						81.50544	

APPENDIX 10

RESULTS OF FINAL REGRESSION ANALYSES

ICC DATA CLASS I-I RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

VARIABLE	MEAN	STANDARD DEV	CASES
EASTERN	0.3721	0.4862	86
SOUTHERN	0.2558	0.4389	86
WESTERN	0.3721	0.4862	86
INDEP	0.3953	0.4918	86
INDUSTRY	0.5465	0.5008	86
TRAKMAIN	14.5465	12.2586	86
TOTTNSRV	207.7791	246.3794	86
LOCMILES	13.8721	17.5836	86
ADMIN	26.7046	28.3689	86
XTIESREP	96.9397	87.0024	86
TOTMOWS	67.6953	63.0269	86
TOTMOE	37.5070	46.5453	86
TRAFFIC	6.8105	8.9444	86
TOTTRANS	81.0337	96.1611	86
TOTGEN	37.0349	33.5025	86
GRANDTOT	230.4383	199.7320	86
NUMCONNS	1.3605	0.7180	86

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

CORRELATION COEFFICIENTS

A VALUE OF 99.00000 IS PRINTED
IF A COEFFICIENT CANNOT BE COMPUTED.

	EASTERN	SOUTHERN	WESTERN	INDEP	INDUSTRY	TRAKMAIN	TOTTNSRV	LOCMILES	ADMIN	XTIESREP	TOTMOWS	TOTMOE
EASTERN	1.00000	-0.45134	-0.59259	0.06637	-0.12024	-0.08387	-0.16342	-0.10570	-0.18001	0.00086	-0.13597	-0.03963
SOUTHERN	-0.45134	1.00000	-0.45134	0.12549	-0.10831	-0.05909	-0.01427	-0.06248	0.14835	-0.07743	-0.09178	-0.10180
WESTERN	-0.59259	-0.45134	1.00000	-0.17965	0.21801	0.13721	0.17630	0.16210	0.04610	0.06903	0.21882	0.13151
INDEP	0.06637	0.12549	-0.17965	1.00000	-0.88768	-0.09480	-0.08141	-0.13326	0.06825	-0.09277	-0.11798	-0.15739
INDUSTRY	-0.12024	-0.10831	0.21801	-0.88768	1.00000	0.09068	0.11532	0.11786	-0.03621	0.02068	0.06490	0.15797
TRAKMAIN	-0.08387	-0.05909	0.13721	-0.09480	0.09068	1.00000	0.14991	0.40636	0.24414	-0.17957	0.54997	0.22284
TOTTNSRV	-0.16342	-0.01427	0.17630	-0.08141	0.11532	0.14991	1.00000	0.64723	0.39594	0.10418	0.55198	0.60762
LOCMILES	-0.10570	-0.06248	0.16210	-0.13326	0.11786	0.40636	0.64723	1.00000	0.29976	-0.05976	0.54876	0.79221
ADMIN	-0.18001	0.14835	0.04610	0.06825	-0.03621	0.24414	0.39594	0.29976	1.00000	0.16070	0.34138	0.29078
XTIESREP	0.00086	-0.07743	0.06903	-0.09277	0.02068	-0.17957	0.10418	-0.05976	0.16070	1.00000	0.22400	0.00861
TOTMOWS	-0.13597	-0.09178	0.21882	-0.11798	0.06490	0.54997	0.55198	0.54876	0.34138	0.22400	1.00000	0.46725
TOTMOE	-0.03963	-0.10180	0.13151	-0.15739	0.15797	0.22284	0.60762	0.79221	0.29078	0.00861	0.46725	1.00000
TRAFFIC	-0.18297	0.24057	-0.03418	0.17664	-0.12658	0.37141	0.29687	0.35302	0.29453	-0.11574	0.32555	0.27352
TOTTRANS	-0.14116	-0.11511	0.24507	-0.18557	0.18422	0.21479	0.78431	0.86919	0.39441	0.07420	0.52143	0.78831
TOTGEN	-0.15761	0.15565	0.01711	0.05792	-0.03250	0.25081	0.44888	0.39508	0.94622	0.11492	0.39413	0.38641
GRANDTOT	-0.14791	-0.07757	0.21793	-0.14355	0.13292	0.38696	0.78064	0.85859	0.54044	0.12409	0.75763	0.83824
NUMCONNS	-0.11912	0.03994	0.08307	-0.00852	0.00190	0.37966	0.32212	0.33560	0.32507	-0.08514	0.38134	0.18057

	TRAFFIC	TOTTRANS	TOTGEN	GRANDTOT	NUMCONNS
EASTERN	-0.18297	-0.14116	-0.15761	-0.14791	-0.11912
SOUTHERN	0.24057	-0.11511	0.15565	-0.07757	0.03994
WESTERN	-0.03418	0.24507	0.01711	0.21793	0.08307
INDEP	0.17664	-0.18557	0.05792	-0.14355	-0.00852
INDUSTRY	-0.12658	0.18422	-0.03250	0.13292	0.00190
TRAKMAIN	0.37141	0.21479	0.25081	0.38696	0.37966
TOTTNSRV	0.29687	0.78431	0.44888	0.78064	0.32212
LOCMILES	0.35302	0.86919	0.39508	0.85859	0.33560
ADMIN	0.29453	0.39441	0.94622	0.54044	0.32507
XTIESREP	-0.11574	0.07420	0.11492	0.12409	-0.08514
TOTMOWS	0.32555	0.52143	0.39413	0.75763	0.38134
TOTMOE	0.27352	0.78831	0.38641	0.83824	0.18057
TRAFFIC	1.00000	0.27346	0.34062	0.39162	0.50956
TOTTRANS	0.27346	1.00000	0.45333	0.91696	0.30559
TOTGEN	0.34062	0.45333	1.00000	0.62060	0.35432
GRANDTOT	0.39162	0.91696	0.62060	1.00000	0.40222
NUMCONNS	0.50956	0.30559	0.35432	0.40222	1.00000

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. TOTMOWS TOTAL M O W AND STRUCTURES $000

VARIABLE(S) ENTERED ON STEP NUMBER 1.. TRAKMAIN MAIN TRACK MILEAGE - MILES
TOTTNSRV TOTAL TONS REV FREIGHT CARRIED 000
XTIESREP NUMBER OF TIES REPLACED PER MILE

MULTIPLE R	0.77397
R SQUARE	0.59903
ADJUSTED R SQUARE	0.58436
STANDARD ERROR	40.63364

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	3.	202263.29258	67421.09753	40.83422
RESIDUAL	82.	135389.61579	1651.09288	

---------------- VARIABLES IN THE EQUATION ----------------

VARIABLE	B	BETA	STD ERROR B	F
TRAKMAIN	2.73808	0.53255	0.37102	54.462
TOTTNSRV	0.11350	0.44367	0.01826	38.635
XTIESREP	0.19806	0.27341	0.05197	14.525
(CONSTANT)	-14.91631			

------------- VARIABLES NOT IN THE EQUATION -------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * *   VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. TOTMOWS TOTAL M O W AND STRUCTURES $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
TRAKMAIN	MAIN TRACK MILEAGE - MILES	0.54997	0.30247	0.30247	0.54997	2.73808	0.53255
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.72664	0.52800	0.22553	0.55198	0.11350	0.44367
XTIESREP	NUMBER OF TIES REPLACED PER MILE	0.77397	0.59903	0.07103	0.22400	0.19806	0.27341
(CONSTANT)						-14.91631	

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 2

DEPENDENT VARIABLE.. TOTMOE TOTAL MAINTENANCE OF EQUIPMENT $000

VARIABLE(S) ENTERED ON STEP NUMBER 1.. TOTTNSRV TOTAL TONS REV FREIGHT CARRIED 000
LOCMILES TOTAL LOCOMOTIVE UNIT-MILES 000

MULTIPLE R	0.80193	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	0.64309	REGRESSION	2.	118424.86458	59212.43229	74.77607
ADJUSTED R SQUARE	0.63449	RESIDUAL	83.	65724.66009	791.86337	
STANDARD ERROR	28.14007					

------------------ VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
TOTTNSRV	0.03085	0.16328	0.01625	3.603
LOCMILES	1.81732	0.68653	0.22771	63.692
(CONSTANT)	5.88790			

------------- VARIABLES NOT IN THE EQUATION -------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 2

DEPENDENT VARIABLE.. TOTMOE TOTAL MAINTENANCE OF EQUIPMENT $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.60762	0.36921	0.36921	0.60762	0.03085	0.16328
LOCMILES	TOTAL LOCOMOTIVE UNIT-MILES 000	0.80193	0.64309	0.27388	0.79221	1.81732	0.68653
(CONSTANT)						5.88790	

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * *   VARIABLE LIST 1
REGRESSION LIST 3

DEPENDENT VARIABLE.. TRAFFIC TRAFFIC EXPENSES $000

VARIABLE(S) ENTERED ON STEP NUMBER 1..

SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT
INDEP	CARRIER OWNERSHIP - INDEPENDENT
TRAKMAIN	MAIN TRACK MILEAGE - MILES
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000
NUMCONNS	NUMBER OF CONNECTING CARRIERS

MULTIPLE R	0.63782
R SQUARE	0.40682
ADJUSTED R SQUARE	0.36974
STANDARD ERROR	7.10094

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	5.	2766.40834	553.28167	10.97305
RESIDUAL	80.	4033.74982	50.42187	

------------------ VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
SOUTHERN	4.46852	0.21926	1.77487	6.339
INDEP	3.42710	0.18843	1.58996	4.646
TRAKMAIN	0.17644	0.24182	0.06843	6.649
TOTTNSRV	0.00595	0.16382	0.00331	3.219
NUMCONNS	4.45733	0.35783	1.21580	13.441
(CONSTANT)	-5.55389			

------------------ VARIABLES NOT IN THE EQUATION ------------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 3

DEPENDENT VARIABLE.. TRAFFIC TRAFFIC EXPENSES $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT	0.24057	0.05787	0.05787	0.24057	4.46852	0.21926
INDEP	CARRIER OWNERSHIP - INDEPENDENT	0.28225	0.07966	0.02179	0.17664	3.42710	0.18843
TRAKMAIN	MAIN TRACK MILEAGE - MILES	0.49028	0.24038	0.16071	0.37141	0.17644	0.24182
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.55422	0.30715	0.06678	0.29687	0.00595	0.16382
NUMCONNS	NUMBER OF CONNECTING CARRIERS	0.63782	0.40682	0.09966	0.50956	4.45733	0.35783
(CONSTANT)						-5.55389	

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* MULTIPLE REGRESSION * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. TOTTRANS TOTAL TRANSPORTATION RAIL LINE $000

VARIABLE(S) ENTERED ON STEP NUMBER 1..

SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000
LOCMILES	TOTAL LOCOMOTIVE UNIT-MILES 000

MULTIPLE R	0.91932
R SQUARE	0.84515
ADJUSTED R SQUARE	0.83948
STANDARD ERROR	38.52631

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	3.	664281.27866	221427.09289	149.18182
RESIDUAL	82.	121710.68959	1484.27670	

------------------ VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
SOUTHERN	-15.59007	-0.07115	9.54579	2.667
TOTTNSRV	0.15019	0.38480	0.02226	45.509
LOCMILES	3.36711	0.61569	0.31252	116.078
(CONSTANT)	7.10756			

------------- VARIABLES NOT IN THE EQUATION -------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. TOTTRANS TOTAL TRANSPORTATION RAIL LINE $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
SOUTHERN	CARRIER LOCATED IN SOUTHERN DISTRICT	0.11511	0.01325	0.01325	-0.11511	-15.59007	-0.07115
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.79117	0.62595	0.61270	0.78431	0.15019	0.38480
LOCMILES	TOTAL LOCOMOTIVE UNIT-MILES 000	0.91932	0.84515	0.21920	0.86919	3.36711	0.61569
(CONSTANT)						7.10756	

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * *   VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. TOTGEN TOTAL GENERAL EXPENSES $000

VARIABLE(S) ENTERED ON STEP NUMBER 1.. TOTTNSRV TOTAL TONS REV FREIGHT CARRIED 000
ADMIN ADMINISTRATION $000

MULTIPLE R	0.94967
R SQUARE	0.90188
ADJUSTED R SQUARE	0.89951
STANDARD ERROR	10.62017

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	2.	86044.15071	43022.07535	381.44169
RESIDUAL	83.	9361.41058	112.78808	

---------------- VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
TOTTNSRV	0.01197	0.08804	0.00509	5.529
ADMIN	1.07628	0.91137	0.04422	592.440
(CONSTANT)	5.80560			

------------- VARIABLES NOT IN THE EQUATION --------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. TOTGEN TOTAL GENERAL EXPENSES $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.44888	0.20150	0.20150	0.44888	0.01197	0.08804
ADMIN	ADMINISTRATION $000	0.94967	0.90188	0.70038	0.94622	1.07628	0.91137
(CONSTANT)						5.80560	

ICC DATA CLASS II RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. GRANDTOT GRAND TOTAL RWY OPER EXPENSES $000

VARIABLE(S) ENTERED ON STEP NUMBER 1.. TRAKMAIN MAIN TRACK MILEAGE - MILES
TOTTNSRV TOTAL TONS REV FREIGHT CARRIED 000
XTIESREP NUMBER OF TIES REPLACED PER MILE

MULTIPLE R	0.83293
R SQUARE	0.69377
ADJUSTED R SQUARE	0.68257
STANDARD ERROR	112.53155

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	3.	2352497.97886	784165.99295	61.92406
RESIDUAL	82.	1038394.68959	12663.34987	

------------------ VARIABLES IN THE EQUATION ------------------

VARIABLE	B	BETA	STD ERROR B	F
TRAKMAIN	4.83008	0.29645	1.02751	22.097
TOTTNSRV	0.58822	0.72560	0.05057	135.309
XTIESREP	0.23354	0.10173	0.14392	2.633
(CONSTANT)	15.31810			

------------- VARIABLES NOT IN THE EQUATION -------------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

ICC DATA CLASS I-I RAILROADS

FILE RAIL4 (CREATION DATE = 06/17/76)

* M U L T I P L E   R E G R E S S I O N * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. GRANDTOT GRAND TOTAL RWY OPER EXPENSES $000

SUMMARY TABLE

VARIABLE		MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R	B	BETA
TRAKMAIN	MAIN TRACK MILEAGE - MILES	0.38696	0.14974	0.14974	0.38696	4.83008	0.29645
TOTTNSRV	TOTAL TONS REV FREIGHT CARRIED 000	0.82700	0.68394	0.53420	0.78064	0.58822	0.72560
XTIESREP	NUMBER OF TIES REPLACED PER MILE	0.83293	0.69377	0.00983	0.12409	0.23354	0.10173
(CONSTANT)						15.31810	

REQUEST FOR FEEDBACK TO
The DOT Program Of University Research

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YES	NO	
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